



TOOLE COUNTY, MT COMMUNITY WILDFIRE PROTECTION PLAN

Prepared for:
Toole County Department of Disaster &
Emergency Services
226 1st Street South
Shelby, MT
59474

Prepared by:
DJ&A, P.C.
2000 Maple St
Missoula, MT 59808



October 2026



THIS PAGE LEFT BLANK INTENTIONALLY



Approvals

Mary Ann Harwood
Toole County Commissioner

Date

Terry Kimmet
Toole County Commissioner

Date

TBD
Toole County Commissioner

Date

Norm Nelson
Toole County Fire Warden

Date

Kelsey Buckley
Toole County Department of Emergency Services
Coordinator

Date

John Houston
Montana Department of Natural Resources and
Conservation, Area Manager

Date

Ron Buck
Shelby Fire Chief

Date

Ben McAlpine
Sunburst Fire Chief

Date



Document Version History

Issue Date	Version	Comments
September 2026	Preliminary Draft	
October 2026	Draft	

Data Product Disclaimer

The purpose of the risk assessment contained in this Community Wildfire Protection Plan is solely to provide a broad, county-level overview of general wildfire risks within the county when the risk assessment was conducted. The risk assessment is for informational purposes only and intended to serve as a resource for the county when planning for wildfire. This risk assessment is based on various assumptions and models, which in turn are based upon data, software tools, and other information provided by third parties (collectively, “Third-Party Information”). DJ&A, LLC (DJ&A) relied upon Third-Party Information in the preparation of this risk assessment and DJ&A shall have no liability to any party in connection with this risk assessment including, without limitation, as a result of incomplete or inaccurate Third-Party Information used in the preparation hereof. This risk assessment may not be relied upon by any party without the express written consent of DJ&A. DJ&A hereby expressly disclaims any responsibility for the accuracy or reliability of the Third-Party Information relied upon in preparing this risk assessment. DJ&A shall have no liability for any damage, loss (including loss of life), injury, property damage, or other damages whatsoever arising from or in connection with this risk assessment, including any person's use or reliance on the information contained in this risk assessment. Any reproduction or dissemination of this risk assessment or any portion thereof shall include the entirety of this disclaimer.

The Toole County Community Wildfire Protection Plan (CWPP) is a living document that is regularly updated as new information becomes available. Updated versions of the CWPP and associated maps can be found at the Toole County Website Homepage: [MAIN Page - Toole County](#) as well as the Emergency Management page: [Disaster and Emergency Relief - Toole County](#), and are the central locations to find the most updated version of all CWPP material.

Acknowledgments

The Toole County Community Wildfire Protection Plan Core Team members would like to thank all who contributed their time and expertise towards the development of this critical planning document, including individuals from the Toole County Department of Disaster & Emergency Services, other Toole County officials and personnel, city and rural fire departments, local utility departments, Montana Department of Natural Resources and Conservation (MT DNRC), U.S. Wildland Fire Service (USWFS), and many other engaged stakeholders and members of the public. These contributions were invaluable throughout the process and have created a well-rounded and effective document that will serve Toole County for years to come.



List of Acronyms

Acronym	Definition
BLM	Bureau of Land Management
cNVC	Conditional Net Value Change
CWPP	Community Wildfire Protection Plan
eNVC	Expected Net Value Change
E.O.	Executive Order
EVT	Existing Vegetation Type
FLAME	Federal Land Assistance, Management, and Enhancement Act of 2009
GIS	Geographic Information System
GET	Ground Evacuation Time
HFRA	Healthy Forests Restoration Act of 2003
HIFLD	Homeland Infrastructure Foundation-Level Database
HIZ	Home Ignition Zone
HUC	Hydrologic Unit Code
HVRA	Highly Valued Resources and Assets
MT DNRC	Montana Department of Natural Resources and Conservation
MWRA	Montana Wildfire Risk Assessment
NEPA	National Environmental Policy Act
NFP	National Fire Plan
NWCG	National Wildfire Coordinating Group
PCL	Potential Control Location Suitability
ROS	Rate of Spread
SAB	Strategic Analytics Branch
SDI	Suppression Difficulty Index
USDA	United States Department of Agriculture
USWFS	United States Wildland Fire Service
WUI	Wildland Urban Interface



Contents

Approvals	i
Data Product Disclaimer	iii
Acknowledgments	iv
List of Acronyms	v
Table of Contents	vi
Executive Summary	ix
How to Use This Plan	x
Section 1: Introduction and Background	x
Section 2: Wildland Urban Interface and Risk Assessment	x
Section 3: Implementation	x
Section 1: Introduction and Background	1
1.1. Community Wildfire Protection Plans	1
Purpose of this CWPP	1
Funding for Wildfire Risk Reduction	1
CWPP Requirements	1
1.2. Relationship to Other Plans, Policies, and Regulations	3
Federal	4
State	4
Local	4
1.3. Public Engagement and Collaboration	5
1.4. Summary of Updates to the CWPP	5
Section 2: Wildland Urban Interface and Risk Assessment	7
2.1. Wildland Fire and Toole County	7
County Overview	7
Economy	7
Government	7
Land Use	8
Critical Infrastructure	8
Demographics	9
Fire Environment	10
2.2. Wildland Fire Management	14
Capacity	14
Resources	14
Additional Fire Protection and Collaborative Agreements	15



2.3.	The Wildland Urban Interface.....	15
	WUI Overview	15
	WUI Components.....	15
2.4.	Wildfire Risk	19
	Risk Assessment and Community Base Map	20
	Response Time Analysis	21
	U.S. Forest Service Strategic Analytics Branch.....	21
Section 3: Implementation		23
3.1.	Integrating the National Cohesive Strategy	23
	Restore and Maintain Resilient Landscapes	23
	Fire Adapted Communities	23
3.2.	Implementation.....	27
	Goals, Objectives, and Strategies	27
	Action Plan	27
	Monitoring.....	27
	Prioritization Process	28
3.3.	Future Actions	28
References		29
Appendices		31
Appendix A: Implementation – Goals, Objectives, and Strategies		A-1
Appendix B: Implementation – Action Table and Project Monitoring Form		B-1
Appendix C: Maps.....		C-1
Appendix D: Fire Department Resources		D-1
Appendix E: Cooperative Agreements.....		E-1
Appendix F: Potential Funding Sources.....		F-1
Appendix G: Glossary of Terms		G-1
Appendix H: Wildland Urban Interface Summary Table.....		H-1

List of Tables

Table 1	Core Team Members	2
Table 2	Community Wildfire Protection Plan Update Timeline	3
Table 3	Summary of Selected Demographic Metrics for Toole County, MT	9
Table 4	Existing Vegetation Types in Toole County.....	11
Table 5	Fuel Model Acreage in Toole County	13
Table 6	Toole County Community Wildfire Protection Plan Update Action Plan	B-2
Table 7	Project Monitoring Form	B-10
Table 8	North Toole County / Sunburst Fire Department Resources.....	D-1
Table 9	South Toole County / Shelby Fire Department Resources.....	D-2
Table 10	MT DNRC Fire Suppression Resources Available to Toole County	D-3



Table 11 BLM Fire Suppression Resources Available to Toole County	D-4
Table 12 Summaries of Cooperative Agreements Currently on File in Toole County	E-2
Table 13 Potential Funding Opportunities for Homeowners and Toole County	F-1
Table 14 Glossary of Terms used in the 2027 CWPP	G-2
Table 15 Toole County WUI Components and Definitions	H-2

List of Figures

Figure 1 Interagency firefighters responding to a fire in Toole County	1
Figure 2 BLM fuels reduction project in the Sweet Grass Hills, Toole County	3
Figure 3 Shelby / South Toole County Fire Dept.	14
Figure 4 Sunburst / North Toole County Fire Dept.	15
Figure 5 MT DNRC Functional WUI and Toole County Additions	18
Figure 6 Components of Wildfire Risk	20

Executive Summary

This document constitutes the updated version of the 2011 Community Wildfire Protection Plan (CWPP) for Toole County. The Healthy Forests Restoration Act of 2003 (HFRA) encourages the development of CWPPs to help communities plan for, respond to, and recover from wildfire events.

This CWPP is a community-based plan focused on identifying and addressing the local threat of wildfire. This living document is updated as needed to use the best available information to characterize current conditions, identify resources and assets susceptible to wildfire, and identify and interpret wildfire risk throughout the County. Information regarding the CWPP can be found online at: <https://toolecountymt.gov/> and <https://toolecountymt.gov/disaster-and-emergency-relief/>

The successful development of the CWPP is the result of collaborative effort by an interdisciplinary CWPP “Core Team,” the public, and other stakeholders who submitted feedback during public meetings, public engagement opportunities, and a formal public comment process. This feedback has resulted in a comprehensive CWPP that incorporates a wide variety of perspectives and experiences.

Notable components of this CWPP include identification and clarification of the Wildland Urban Interface (WUI), prioritized areas for fuel reduction projects within the County, a detailed implementation plan and action table, and recommendations to reduce structural ignitability and wildfire risk.

These elements of the CWPP fulfill HFRA requirements and provide decision-makers and stakeholders with a useful and current tool to address local wildfire risk. This updated CWPP also facilitates access to funding for eligible projects that reduce wildfire risk, increase wildfire response capacity, and provide public education regarding wildfires and associated risk.

The CWPP also summarizes the regulatory environment surrounding the development of a CWPP and characterizes the County including demographics, government structure, land use, and the fire environment.

The implementation plan developed for the CWPP consists of goals, objectives, strategies, and projects that align with federal, state, and local goals while also meeting the unique needs of the County. This implementation plan interfaces directly with a detailed action plan, consisting of individual projects collaboratively developed by the CWPP Core Team, the public, and stakeholders.

The Toole County CWPP is a comprehensive resource that characterizes current conditions and available resources, identifies and interprets wildfire risk, and provides next steps intended to mitigate that risk and provide the public with recommendations to reduce structural ignitability. The updated elements developed throughout this process also facilitate access to a variety of funding opportunities to implement the goals, objectives, and strategies outlined in the CWPP.

How to Use This Plan

The CWPP is meant to be read and used by both technical and general audiences and is organized to allow intuitive navigation to sections of particular interest while also maintaining logical flow throughout the document. The following overview provides a summary of the three CWPP sections.

Section 1: Introduction and Background

This section provides relevant information characterizing Toole County as it relates to topics addressed within Section 2 and Section 3 of the CWPP. Topics covered within this section relate to the purpose, need, and requirements of a CWPP document, the relationship of the CWPP to other active plans, policies, and regulations applicable to the County, and public engagement and collaboration.

Section 2: Wildland Urban Interface and Risk Assessment

This section contains a summary of baseline information for Toole County, including government, land use, and demographics. The fire environment is also characterized, including descriptions of topography, hydrology, climate, vegetation, fuels, and fire history. This section also reviews wildfire risk assessment data across the County and provides context for interpretation. At-risk and underserved communities are also characterized with respect to federal definitions as they relate to the CWPP process.

Section 3: Implementation

This section explains how the CWPP integrates with the National Cohesive Strategy, outlines various resources for homeowners to reduce structural ignitability, characterizes the County's current capacity for wildfire response efforts, and provides a detailed action plan outlining applicable goals, objectives, strategies, and projects identified through the CWPP update process. This section also includes priority areas for wildfire risk reduction throughout the County.

Virtual CWPP Resources

County Website: <https://toolecountymt.gov/>

CWPP StoryMap: <https://storymaps.arcgis.com/stories/aeaaa4c12b1d461c91874df6af1b337f>

Section 1: Introduction and Background

1.1 Community Wildfire Protection Plans

Purpose of this CWPP

Following decades of fire suppression, changing climate, and subsequently increasing frequency of catastrophic wildfire events, lawmakers identified the need to equip individual communities with tools and funding to address the growing threat of wildfire. HFRA was enacted in 2003, outlining a basic process for at-risk communities to do this by creating a CWPP. A CWPP is a planning document that assists communities in preparing for, responding to, and recovering from wildfire. CWPPs can vary widely across communities based on unique local needs and priorities. HFRA further encourages hazardous fuel management and community participation to reduce the risk of large wildfires and directs federal land management agencies to prioritize authorized hazardous fuel reduction projects that provide for the protection of at-risk and/or underserved communities that implement CWPPs. Communities are encouraged to create CWPPs to plan for wildfire mitigation activities and tailor the plans to their unique environment.

This document constitutes Toole County's updated CWPP, which will guide planners, fire departments, citizens, and other stakeholders in preventing, responding to, recovering from, and living with wildfire. A newly published CWPP is required for the County to be eligible for federal funding to implement projects that mitigate wildfire risk.

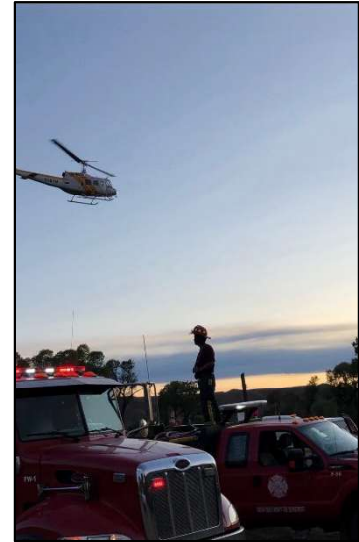


Figure 1 Interagency firefighters responding to a fire in Toole County

Funding for Wildfire Risk Reduction

With this update to the Toole County CWPP, Toole County, county residents, and other entities will be eligible for federal funding to support wildfire risk mitigation work across a diversity of land ownership and private property, as well as infrastructure needs and support for volunteer fire departments and other local emergency response organizations. The CWPP may also support applications for other grant funding through state, private, non-profit, or other sources that may further support priority actions outlined in the CWPP. More information on grants and funding can be found in the Fire Adapted Communities section and in [Appendix F](#) of this document.

CWPP Requirements

Though the content in CWPPs can vary based on the landscape, needs, and values of a given county, HFRA identifies four basic requirements for counties seeking federal funding. These requirements include:

- Collaboration
- Prioritized Fuel Reduction
- Recommendations to Reduce Structure Ignitability
- Agreement on final CWPP contents by the local government, local fire departments, and the state entity responsible for forest management, such as the Montana Department of Natural Resources and Conservation (MT DNRC)

Collaboration

CWPPs must be developed through a collaborative process involving local and state representatives, federal agencies, and other interested parties. Ideally, this collaboration will engage a broad range of stakeholders to ensure the CWPP reflects the best local knowledge, receives widespread community buy-in, and accounts for ongoing and planned future projects. The 2027 CWPP was developed collaboratively by an interdisciplinary team of local county, city, and fire department representatives, wildfire response personnel, subject matter specialists, state and federal agency representatives, and key stakeholders, with support from DJ&A, a Montana-based environmental consulting firm. This interdisciplinary group is hereafter referred to as the “Core Team” (Table 1).

The Core Team

Table 1 Core Team Members

Name	Role
Toole County and Local Government	
Kelsey Buckley	Toole County Department of Emergency Services Coordinator
Norm Nelson	Toole County Fire Warden
Terry Tomsheck	Toole County Commissioner
Mary Ann Harwood	Toole County Commissioner
Terry Kimmet	Toole County Commissioner
Ron Buck	Shelby Fire Chief
Ben McAlpine	North Toole County Fire Chief
Tevin Chilton	North Toole County Fire Department
Private / Utilities	
Shane Clark	Marias River Electric – General Manager
State	
Sarah Kleinhanzl	MT DNRC – Community Wildfire Resilience Specialist
Hannah Sullivan	MT DNRC – Community Prevention and Wildfire Preparedness Specialist
Taten Knapp	MT Department of Emergency Services – Plans and Assessments Coordinator
Federal	
Shannon Bonney	Bureau of Land Management / USWFS – Fire Mitigation and Education Specialist
Clinton Mrnak	Bureau of Land Management / USWFS – Wildland Fire Service

Prioritized Fuel Reduction

CWPPs must prioritize fuel reduction projects by identifying priority areas and treatment methods to protect at-risk communities and essential infrastructure. Often, CWPPs will consider recent, ongoing, and planned future projects and will serve as an implementation plan for years to come. The 2027

CWPP provides spatial priority mapping across the County using planning areas ([Appendix C](#)). Recommended treatment methods are incorporated into the CWPP via the inclusion of strategies ([Appendix A](#)) and proposed projects within the action table ([Appendix B](#)).

Recommendations to Reduce Structural Ignitability

CWPPs must recommend measures to reduce structural ignitability. These measures can be implemented by private citizens to prevent loss and damage to their property in the event of wildfire. The 2027 CWPP provides an overview of concepts and recommendations to reduce structural ignitability in the [Fire Adapted Communities](#) and [Living with Fire](#) sections.



Figure 2 BLM fuels reduction project in the Sweet Grass Hills, Toole County

Final Approval and Signatures

The CWPP must be approved and signed by the Toole County commissioners, chiefs of local fire departments, and a MT DNRC representative.

Timeline of the Community Wildfire Protection Plan Update Process

The update process was initiated in February of 2026 and concluded in January of 2027. The final CWPP was signed into effect by all signatories on **TBD of 2027** (Table 2).

Table 2 Community Wildfire Protection Plan Update Timeline

Milestone/Event	Date
CWPP Process Begins	February 9, 2026
CWPP Core Team Workshop	April 22, 2026
Open House Public Meetings (Shelby and Sunburst, MT)	June 10-11, 2026
Preliminary Draft CWPP	September 11, 2026
Draft CWPP for Public Review	October 21, 2026
Virtual Public Meeting	October 21, 2026
Public Comment Period (30 days)	October 21, 2026 – November 20, 2026
Final Draft CWPP	December 7, 2026
Final CWPP Completed	January 15, 2027
CWPP Signed into Effect	January 2027

1.2 Relationship to Other Plans, Policies, and Regulations

Conformance with relevant plans, policies, and regulations at federal, state, and local levels are critical components of an effective CWPP. The 2027 CWPP conforms with the following plans, laws, and policies in order to maintain consistency and standardization.

Federal

National Fire Plan

Established in 2000, the National Fire Plan (NFP) addresses five key points: firefighting, rehabilitation, hazardous fuel reduction, community assistance, and accountability. In order to implement actions related to these five key points, the NFP seeks to ensure sufficient firefighting resources for the future; rehabilitate and restore fire damaged ecosystems; reduce the amount of flammable fuels in forests, and established the Wildland Fire Leadership Council (US DOI and USDA 2023). The NFP also encourages the creation of a CWPP. The 2027 CWPP aligns with the key points and actions of the NFP by enabling Toole County to mitigate wildfire risk using resources made available by the NFP and in conformance with its key points.

Healthy Forests Restoration Act

The Healthy Forest Restoration Act of 2003 (P.L. 108-148) encourages hazardous fuel management and community participation to reduce the risk of large wildfires. HFRA directs federal land management agencies to prioritize authorized hazardous fuel reduction projects that help protect at-risk communities that implement CWPPs and their watersheds. HFRA includes a WUI definition and provides standards and criteria for designating the WUI. It also provides flexibility for communities (and counties) to delineate the WUI based on their risk and needs. Communities are encouraged to create CWPPs to plan for wildfire mitigation activities and tailor the plans to their unique environments. HFRA requires CWPPs to meet three requirements: collaboration, prioritized fuel reduction, and treatment of structural ignitability. Collaboratively developed CWPPs must also be approved by the local government, local fire department, and the state. The 2027 CWPP has been prepared in compliance with HFRA requirements and recommendations.

Federal Land Assistance, Management, and Enhancement Act and The National Cohesive Strategy

The Federal Land Assistance, Management, and Enhancement (FLAME) Act of 2009 (P.L. 111-88) establishes the need for hazardous fuel reduction funding and community wildfire risk assessments across the nation. The FLAME Act also created the National Cohesive Wildland Fire Management Strategy (National Cohesive Strategy) to manage wildland fire more effectively nationwide. The National Cohesive Strategy outlines three goals: restore and maintain landscapes, create fire adapted communities, and improve wildfire response (Wildland Fire Leadership Council 2023; US DOI and USDA 2014). The 2027 CWPP aligns with the three goals established by the National Cohesive Strategy (see [Section 3: Implementation](#)).

State

Montana Forest Action Plan

The Montana Forest Action Plan is a comprehensive plan for Montana's forests that is comprised of an assessment of forest conditions, priority areas for focused attention, and goals and strategies for improving forests (The Montana Forest Action Advisory Council and MT DNRC 2020). The Montana Forest Action Plan prioritizes the revision of CWPPs through the "Foster Fire-Adapted Communities" strategy (The Montana Forest Action Advisory Council and MT DNRC 2020).

Local

The CWPP is intended to supplement existing plans and agreements by providing focused information regarding wildfire risk and recommendations to reduce it. Local planning documents contain important information about the community that, when incorporated into the CWPP process,

facilitate a document that accurately reflects the unique needs and priorities of the community. Toole County documents include:

Toole County Plans, Agreements, and Regulations

- Village of Coutts (Alberta, Canada) and Toole County (1997 / updated in 2021)
- Malmstrom Air Force Base and Sunburst Volunteer Fire Department (2021)
- Malmstrom Air Force Base and Shelby Volunteer Fire Department (2023)
- MT DNRC Firefighter Property Cooperative Agreement (2020),
- MT DNRC State/County Cooperative Fire Control Agreement (2024)
- Central Montana Regional Hazard Mitigation Plan: Toole County (Annex O) (2024)

Neighboring County CWPPs

- Glacier County (2007)
- Pondera County (2007)
- Liberty County (2007)

1.3 Public Engagement and Collaboration

The CWPP update process began in February 2026 and continued for nearly one year, consisting of public engagement efforts such as building a representative CWPP Core Team, developing publicly available informational resources, creating a central online location for CWPP information, soliciting stakeholder feedback, and providing CWPP information and opportunities for engagement through social media, press, and public meetings. Public engagement efforts provided multiple opportunities for interested stakeholders to be involved in the process. The draft CWPP was made available to the public for a 30-day public comment period, during which ## public comments were received and consisted of...

1.4 Summary of Updates to the CWPP

Core features of the 2027 Toole County CWPP include an updated WUI boundary and delineation, consideration of new risk assessment data and current conditions throughout Toole County, and spatial prioritization mapping. Toole County looks very different today than it did 15 years ago when the previous CWPP was developed. Since that time, a plethora of tools and resources related to identifying, interpreting, and mitigating wildfire risk have become available. The 2027 CWPP accounts for these changes and opens new doors to access grant funding and implement risk reduction projects that protect lives, property, critical infrastructure, and other high value resources not accounted for by the 2011 WUI.

When updating the WUI and CWPP, the interdisciplinary team used newly available science to inform the decision-making process and prioritize future projects. In 2020, DNRC released the Montana Wildfire Risk Assessment (MWRA) which used the best available science to evaluate wildfire risk across the entire state (DNRC 2020). Importantly, it accounts for developments and changing conditions that occurred since the original CWPP was published in 2011, including increasing residential development within wildland fuels and changing forest conditions. The MWRA also provides information regarding potential wildfire risk for areas that may be developed in the future. The data products generated by the MWRA are an invaluable resource for identifying and interpreting wildfire risk, the susceptibility of resources to fire damage, and more. This tool was

integral to the development of a modern and effective CWPP that protects local communities by accurately characterizing wildfire hazard and risk throughout Toole County.

The updated WUI and MWRA were used together to prioritize ongoing and proposed fuel reduction projects (see [Prioritization Process](#)). This prioritization framework helps unlock federal funding that is only available to counties with updated CWPPs and prioritized projects. By integrating the best available science, evaluating current conditions, and prioritizing projects, the 2027 CWPP is a user-friendly, informative, and effective planning document for local leaders and communities.

Section 2: Wildland Urban Interface and Risk Assessment

2.1. Wildland Fire and Toole County

County Overview

Toole County is located in north-central Montana along the international border with the Canadian province of Alberta. The County lies east of Glacier County and the Rocky Mountains, and the Marias River flows west to east across its southern portion as the County's only officially designated perennial stream. It is bordered in the United States by Glacier County to the west, Pondera County to the south, and Liberty County to the east.

Communities in Toole County include Devon, Ethridge, Shelby, Dunkirk, Kevin, Galata, Oilmont, Sunburst, and Sweetgrass. A 24-hour port of entry to Canada is located at Sweetgrass. Shelby is the County seat and the largest community in Toole County, located in the southwest portion (Central Montana Tourism Office 2025).

Totaling approximately 1,245,182 acres, Toole County is the 34th largest county in Montana. The vast majority of Toole County is privately owned (87%). The rest of the County is managed by the State of Montana (8%) and the BLM (2%), with smaller portions managed by the U.S. Fish and Wildlife Service and Bureau of Reclamation as shown in Map 12 ([Appendix C](#)) (Montana Cadastral 2025).

Economy

Agriculture is a principal component of Toole County's economy, with crop production accounting for a greater share of agricultural sales than livestock production. Cattle are the predominant livestock raised, although sheep grazing historically played a larger role in the County. In addition to agriculture, mining, utilities, and transportation and warehousing are considered well-positioned for continued growth and new business development (MSU Extension 2023). These industries benefit from the County's geographic location along the Canadian border, access to raw materials, major east-west rail service, and connections to important north-south and east-west highway corridors. Other significant sources of employment include public administration, healthcare, retail trade, and accommodation and food services. In 2023, Toole County had a labor force of 2,089 people and an unemployment rate of 2.2 percent, slightly below Montana's statewide rate of 2.9 percent (MT Department of Labor & Industry 2024).

Income and workforce trends provide additional context for Toole County's economic conditions. Median household income was \$57,731 from 2020 to 2024 (U.S. Census Bureau 2025). The County's highest-paying industries in 2023 included information, utilities, construction, wholesale trade, and finance and insurance, demonstrating the economic importance of sectors beyond the County's agricultural base (MT Department of Labor & Industry 2024). Despite relatively low unemployment, Toole County has experienced some longer-term economic challenges, including the loss of approximately 254 jobs since 2013 and lower labor force participation than Montana as a whole (MT Department of Labor & Industry 2024). Overall, the County's established agricultural economy, transportation infrastructure, border location, and access to natural resources provide its foundation for economic activity.

Government

Toole County is governed by a Board of County Commissioners, which exercises the County's administrative, executive, and legislative authority in accordance with the Montana Constitution and state law. The Commissioners oversee the general administration of County government, establish policies, appoint department heads and members of boards and committees, and represent the County in official matters (Toole County 2026). Toole County also contains three incorporated

communities, the Towns of Kevin and Sunburst and the City of Shelby, which maintain their own local governments and provide municipal services within their respective jurisdictions (WSP 2024).

Land Use

Toole County includes the communities of Devon, Ethridge, Shelby, Dunkirk, Kevin, Galata, Oilmont, Sunburst, and Sweet Grass. Shelby serves as the County seat and is the County's largest population center. With a population of approximately 5,211 spread across 1,915 square miles, Toole County has a relatively low population density of about 2.7 people per square mile (U.S. Census Bureau 2025).

Shelby is situated at the intersection of Interstate 15 and U.S. Highway 2, making it an important transportation hub within the County. The area is also served by east-west freight and passenger rail, including Amtrak, as well as a major north-south highway corridor. This combination of highway and rail infrastructure provides regional connectivity and supports several sectors of the local economy, including agriculture, utilities, energy development, transportation, and warehousing (Central Montana Tourism Office 2025).

Toole County sits at the top of Montana's 'Golden Triangle,' named for the high-quality grain crops produced in the area (Central Montana Tourism Office 2025). Of the County's approximately 1.25 million acres, roughly 1 million acres are used for crop production. Most agricultural land is managed as dryland, with only about 5,000 acres under irrigation. Irrigated acreage is concentrated primarily along the Marias River and near the Sweet Grass Hills, particularly around impoundment reservoirs (Vermulm 2020).

Two wind farms have been built in Toole County. The Glacier Wind Farm has around 140 towers, with 100 located in Toole County. The Rim Rock Wind Farm near Kevin has around 126 wind towers (Central Montana Tourism Office 2025).

Outdoor recreation in Toole County includes boating, fishing, hunting, birdwatching, camping, and other dispersed recreational activities. Lake Elwell (Tiber Reservoir), Tiber Dam, and the Marias River provide opportunities for boating and fishing, while hunting occurs throughout the County for upland game birds, mule deer, white-tailed deer, pronghorn, and elk. The Sweetgrass Hills support a notable elk population and are used for other outdoor activities beyond hunting. Birdwatching occurs in several areas of the County, including near the Kevin Rim and Lake Elwell. Public and private campgrounds provide access to recreational areas and accommodate both day and overnight use (Central Montana Tourism Office 2025).

Together, these elements form a varied land use pattern in Toole County that reflects a balance among agriculture, recreation, and community life.

Critical Infrastructure

Within Toole County, critical infrastructure was identified through collaboration among Core Team members. Types of critical infrastructure within the County include:

- Highways,
- Railroads,
- Energy facilities,
- Wind farms,
- Communications sites, and
- Oil and gas above-ground and underground pipelines.

Demographics

According to 2025 U.S. Census Bureau estimates, Toole County, Montana, has a population of approximately 5,211 residents, reflecting a 4.8% increase since the 2020 Census count of 4,971. The population has a relatively balanced age distribution, with both younger and older residents represented. Children under five years of age account for 5.1% of the population, while individuals under 18 make up 20.8%. Adults aged 65 years and older comprise 18.7% of the population, representing a substantial older population (U.S. Census Bureau 2025). There are 1,852 households with an average size of 2.40 persons, and 63.1% of housing units are owner-occupied. The median home value is \$218,400, with a median gross rent of \$826. Median household income stands at \$57,731, and 15.6% of residents live in poverty. Most households in Toole County have access to technology, with 95.5% owning a computer and 88.1% subscribing to broadband. Additionally, 12.6% of residents under age 65 have a disability, and 15.6% lack health insurance (U.S. Census Bureau 2025) (Table 3).

Table 3 Summary of Selected Demographic Metrics for Toole County, MT

U.S. Census Bureau Metric	Value
Population	
Population estimates, July 1, 2025, (V2025)	5,211
Population estimates base, April 1, 2020, (V2025)	4,970
Population, percent change - April 1, 2020 (estimates base) to July 1, 2025, (V2025)	4.8%
Population, Census, April 1, 2020	4,971
Population, Census, April 1, 2010	5,324
Age and Sex	
Persons under 5 years, percent	5.1%
Persons under 18 years, percent	20.8%
Persons 65 years and over, percent	18.7%
Female persons, percent	42.9%
Race and Hispanic Origin	
White alone, percent	83.8%
American Indian and Alaska Native alone, percent	7.6%
White alone, not Hispanic or Latino, percent	79.4%
Hispanic or Latino, percent	5.4%
Two or More Races, percent	5.6%
Asian alone, percent	1.5%
Black alone, percent	1.4%
Housing	
Housing Units, July 1, 2025, (V2025)	2,319
Owner-occupied housing unit rate, 2020-2024	63.1%
Median value of owner-occupied housing units, 2020-2024	\$218,400
Median selected monthly owner costs -with a mortgage, 2020-2024	\$1,378
Median selected monthly owner costs -without a mortgage, 2020-2024	\$541
Median gross rent, 2020-2024	\$826
Building Permits, 2025	0

U.S. Census Bureau Metric	Value
Families & Living Arrangements	
Households, 2020-2024	1,852
Persons per household, 2020-2024	2.40
Living in same house 1 year ago, percent of persons age 1 year+, 2020-2024	80.7%
Language other than English spoken at home, percent of persons age 5 years+, 2020-2024	5.2%
Computer and Internet Use	
Households with a computer, percent, 2020-2024	95.5%
Households with a broadband Internet subscription, percent, 2020-2024	88.1%
Health	
With a disability, under age 65 years, percent, 2020-2024	12.6%
Persons without health insurance, under age 65 years, percent	15.6%
Income & Poverty	
Median household income (in 2024 dollars), 2020-2024	\$57,731
Per capita income in past 12 months (in 2024 dollars), 2020-2024	\$36,252
Persons in poverty, percent	15.6%

Fire Environment

Evaluating factors that influence fire behavior and activity is a critical component of an effective CWPP and serves to provide a characterization of the fire environment within Toole County. Fire behavior is influenced by physical characteristics that vary across the landscape such as topography, hydrology, climate, and vegetation. These characteristics, combined with ignition sources, constitute the fire environment.

Topography and Hydrology

Physical characteristics such as elevation, topography, and slope angle influence fire behavior on the landscape. A thorough understanding of these components informs effective and proactive fire management and fire suppression.

Toole County is characterized by broad, rolling plains and agricultural lands that transition into more rugged and elevated terrain in portions of the County. The Sweet Grass Hills are the most prominent topographic feature, rising sharply above the surrounding plains to elevations approaching 7,000 feet. Beyond this feature and the Marias River breaks, the landscape is largely flat with rolling plains (WSP 2024). Most of the County lies at around 3,500 feet in elevation (Vermulm 2020). West of the Sweet Grass Hills, the landscape is generally composed of rolling farmland interspersed with areas of exposed rock and more irregular terrain. The Jerusalem Rocks are a notable example, where distinctive rock formations and hoodoo-like features contrast with the surrounding plains. Together, these features create a varied landscape ranging from relatively level and gently rolling agricultural areas to steep, rocky slopes and isolated mountainous terrain (Central Montana Tourism Office 2025).

Toole County's largest river, the Marias, flows from west to east and empties into Lake Elwell (Tiber Reservoir). Willow Creek flows south through the center of the County also into Lake Elwell (WSP 2024). The County ranks 13th in the state in surface water due to the presence of Lake Elwell. Within the Sweet Grass Hills, Fred and George Creeks are considered unofficial perennial waterways. Toole County also contains a number of intermittent and ephemeral streams that flow seasonally or in

response to precipitation and runoff (Vermulm 2020). The County falls within the Marias River watershed of the Missouri River Basin.

Climate

Annual precipitation varies across Toole County, ranging from approximately 8 to 18 inches, with much of the County receiving between 10 and 12 inches each year. The average annual minimum temperature is 32.5°F and the average annual maximum temp is 54.3°F, however, the area can experience occasionally extreme temperatures ranging from -40°F to 100°F (Prism Climate Group 2025). The prevailing winds in Toole County come from the west and secondarily the northwest (Iowa State University 2026). The average annual wind speed ranges from 12 to 19.5 mph, though stronger gusts are common, with only moderate variation between seasons (Montana State Library 2004).

Vegetation

In the context of fire management, vegetation is often referred to as fuels and heavily influences fire behavior and resultant fire intensity and severity. Vegetation in Toole County is described using the LANDFIRE Existing Vegetation Type (EVT) model, consisting of groups of existing vegetation communities based on field data, satellite imagery, and modelling (LANDFIRE 2023a).

Toole County is represented by 59 EVT models, with the three most prevalent models representing nearly 60% of the land area (LANDFIRE 2023a). Existing Vegetation Type models that cover 5% or less land area, and/or represent non-burnable areas such as rock, scree, and urban pavement are included as “other” in the table below. The six vegetation types listed in Table 4 are the most common in Toole County.

Table 4 Existing Vegetation Types in Toole County

LANDFIRE Existing Vegetation Type (EVT)	Area (acres)	Percentage of Toole County
Northwestern Great Plains Mixedgrass Prairie	294,080	24%
Western Cool Temperate Wheat	257,231	21%
Northern & Central Plains Ruderal & Planted Grassland	177,839	14%
Western Cool Temperate Row Crop - Close Grown Crop	90,947	7%
Western Cool Temperate Row Crop	81,632	7%
Inter-Mountain Basins Mat Saltbush Shrubland	57,886	5%
Other ¹	284,848	20%
Total	1,244,464	100%

¹ Models representing 5% or less land area or non-burnable fuels are classified as other.

Northwestern Great Plains Mixedgrass Prairie

Northwestern Great Plains Mixedgrass Prairie, in which grasses and forbs dominate, is the largest EVT present in Toole County, representing 24% of the total County area (Table 4). Western wheatgrass (*Pascopyrum smithii*), green needlegrass (*Nassella viridula*), needle-and-thread (*Hesperostipa comata*), blue grama (*Bouteloua gracilis*), and fescue (*Festuca* ssp.) are important

species in this EVT (Menard and Kindscher 2015). This EVT has historically had low severity, patchy fires due to natural fire breaks in topography with a fire return interval of 8-12 years. Fire, grazing, and drought are the primary drivers of dynamic processes in this system. However, human activities such as fire suppression and land development, along with the prolific increase in invasive species such as cheatgrass (*Bromus tectorum*), have resulted in a shift from the historical fire regime. Woody encroachment due to fire suppression, such as an increase in sagebrush (*Artemisia* sp.) or ponderosa pine (*Pinus ponderosa*), increases the size, continuity, and abundance of surface fuels, contributing to larger wildfires in this EVT (Menard and Kindscher 2015).

Western Cool Temperate Wheat

Western Cool Temperate Wheat represents 21% of Toole County, making it the second largest EVT in the County (Table 4). This EVT is comprised of agricultural lands cultivating cool-season wheat crops that are typically broadcast or drill-seeded resulting in close-grown rows that are cured before harvest (NRCS 2015). Without extensive irrigation or with irrigation in disrepair, these lands can become an abundant supply of continuous fuels with extremely low fuel moisture, increasing wildfire risk. Harvesting in late summer and early fall can also pose a risk via increased ignition potential during the hottest and driest time of year.

Northern & Central Plains Ruderal & Planted Grassland

Northern & Central Plains Ruderal & Planted Grassland represents 14% of the total county area (Table 4). This EVT generally occurs in areas that have been disturbed by past agricultural activities or development and may include former croplands, seeded pastures, roadsides, and other disturbed grasslands. Species composition ranges from diverse mixtures of herbaceous vegetation to areas strongly dominated by one or two species. Changes in these grassland communities are often associated with a combination of reduced fire frequency, increased grazing pressure, intentional planting of exotic species, and the spread of exotic species from surrounding areas. As a result, some sites may become increasingly dominated by exotic or weedy native herbaceous species (NatureServe 2026). The abundance of herbaceous vegetation within this EVT can create a relatively continuous layer of fine fuels that cures readily during warm, dry conditions.

Western Cool Temperate Row Crop - Close Grown Crop

Western Cool Temperate Row Crop - Close Grown Crop is the fourth largest EVT present in Toole County, representing 7% of the total county area (Table 4). This EVT is made up of agricultural lands consisting of crops such as wheat, barley, and dry peas that are typically broadcast or drill-seeded (NRCS 2015). Toole County's climate is conducive to high-yielding small grain production, and wheat is a mainstay crop for the County. Most agricultural lands in Toole County practice dryland farming without extensive irrigation, with only about 5,000 acres irrigated mainly along the Marias River (Vermulm 2020). Resulting crop yields create an abundant supply of continuous fuels with extremely low fuel moisture, increasing wildfire risk. Harvesting in late summer and early fall also poses a risk via increased ignition potential during the hottest and driest time of year.

Western Cool Temperate Row Crop

Western Cool Temperate Row Crop areas represent 7% of the total Toole County area (Table 4). This EVT consists of cultivated agricultural lands where crops are planted in defined rows rather than densely or continuously seeded. In Toole County, these lands may support crops such as canola, mustard, flax, corn, and other rotational crops grown in smaller quantities throughout the County (Vermulm 2020). Similarly to the Western Cool Temperate Row Crop – Close Grown Crop EVT, crop yields can create a significant supply of continuous fuels with extremely low fuel moisture, increasing wildfire risk. Vegetation and fuel conditions within these areas vary considerably throughout the growing season and with crop type, harvest timing, and field management practices.

Inter-Mountain Basins Mat Saltbush Shrubland

This EVT comprises only 5% of Toole County. These dwarf-shrublands are typically composed of relatively pure stands of *Atriplex* spp. such as mat saltbush (*Atriplex corrugata*) or Gardner's saltbush (*Atriplex gardneris*). This ecological system tends to occur on gentle slopes, rolling plains, and windswept basins present in Toole County. This system does not have a fire regime due to discontinuous fuel (USDA 2020).

Fuels

In the context of fire, fuels are defined as any combustible vegetative material and are a primary driver of fire behavior. Fuel models are used to predict fire behavior based on specific fuelbed characteristics such as size, quantity, density, moisture content, and composition. United States Department of Agriculture (USDA) Standard Fire Behavior Fuel Models are a comprehensive set of models used to define and quantify fuel types. Their impacts on fire behavior fuel models correspond to predicted fire behavior and effects through variables such as Rate of Spread (ROS) and flame length, which influence fire intensity (Scott and Burgan 2005).

Toole County is represented by 21 fuel models in total, with three of those dominating the landscape. GR2 and NB3 fuel models cover over 80% of the total acreage of Toole County (Table 5) (LANDFIRE 2023b). GR2 fuels are described as “low load, dry climate grass” environments, consisting of moderately coarse, grassy fuels with moderate continuity. These fuels are highly influenced by precipitation and have a low moisture of extinction, which is the fuel moisture content at which combustion cannot be sustained independently (Scott and Burgan 2005). GR2 fuels are present in 48% of the land area in Toole County (Table 5). NB3 fuels are described as “agricultural land maintained in a nonburnable condition,” however, if these fuels are allowed to cure before harvest such as with wheat production, the fuels become highly flammable (Scott and Burgan 2005). NB3 fuels, such as those present in the Western Cool Temperate Wheat EVT, represent 35% of the land area in Toole County (Table 5).

The riparian vegetation (trees, shrubs, herbs) present along the Marias River account for less than 2% of fuels in the County. However, the combination of dense vegetation and inaccessibility poses a challenge for suppression efforts and generate a relatively large percentage of wildfire concern.

Table 5 Fuel Model Acreage in Toole County

Fuel Model (Scott and Burgan 2005)	Area (acres)	Percentage of Toole County
GR2 – Low Load, Dry Climate Grass	594,869.50	48%
NB3 – Agricultural	440,842	35%
GS2 – Moderate Load, Dry Climate Grass-Shrub	77,692	6%
TL3 – Moderate Load, Conifer Litter	59,170	5%
Other ¹	71,892	6%
Total	1,244,466	100%

¹ Models representing less than 3% of land area or non-burnable fuels are classified as other.

Fire History

Understanding fire history is an important component of interpreting current fire activity and preparing for future wildfires. Although Toole County has experienced few wildfire events in recent history, this limited fire history does not indicate an absence of wildfire risk. There have been 16 recorded wildfire ignitions in Toole County between 2015 and 2026. Of the 12 incidents with recorded fire size, approximately 496 acres burned. The largest recorded fire occurred in 2021 and burned approximately 400 acres, while the second largest occurred in 2025 and burned approximately 60

acres. Of the incidents with a documented ignition cause, 75% were human-caused, 17% were undetermined, and 8% were attributed to natural causes (NIFC 2025).

Extensive grasslands, rangelands, and agricultural areas can provide continuous fuels capable of supporting rapid fire spread, particularly during periods of hot, dry, and windy weather. Changing climatic conditions, periods of drought, and extreme fire weather may further increase the potential for wildfire ignition and spread. These conditions, combined with the prevalence of human-caused ignitions, underscore the importance of proactive wildfire planning, public education, fuel management, and community preparedness. This updated CWPP provides a framework for identifying areas of elevated risk and prioritizing mitigation measures proactively, before a wildfire exceeds those represented in the County's recent historical record.

2.2. Wildland Fire Management

Capacity



Figure 3 Shelby / South Toole County Fire Dept.

Toole County's wildland fire management capacity is supported by a combination of international (Canadian), federal, state, and local agencies working together to protect communities and natural resources. Wildland-only fire protection is provided by MT DNRC and BLM/USWFS, who cooperate and work together to respond to wildfire events across the County. Two volunteer fire departments serve local communities and coordinate with the County Office of Emergency Management. The Emergency Management Manager/Coordinator serves as the County's Rural Fire Coordinator, acting as the primary link between local fire departments, county leadership, and other fire agencies. Municipal fire departments in Shelby and Sunburst provide structural protection within city limits

and in the wider South Toole County and North Toole County, respectively. Across all entities, firefighter and public safety are the highest priority. All entities work together cooperatively to combine their respective resources and respond to wildfire events across jurisdictional boundaries. Together, these agencies aim to strengthen readiness, improve coordination, and expand homeowner outreach to reduce wildfire risk and enhance community resilience.

Resources

Toole County's firefighting capacity is influenced by both operational limitations and ongoing staffing challenges. Effective coordination among federal agencies, local departments, and the public depends on stable relationships. Volunteer fire departments play a central role in local response and public outreach, but can face reduced staffing, increased equipment costs, and budgets that do not kept pace with inflation. As Toole County depends primarily on volunteer departments, continuity of service and volunteer recruitment and retention are constrained by competing work and family obligations. Though Toole County is currently well-equipped and sufficiently staffed, a strengthened CWPP can support efforts to secure funding for equipment, training, and volunteer incentives to help address these potential capacity constraints. A list of available equipment for volunteer departments and cooperating agencies can be found in [Appendix D](#).

Additional Fire Protection and Collaborative Agreements

Because wildfires are not constrained by jurisdictional boundaries, collaborative agreements help to establish responsibility and aid in coordination of a number of entities. This is particularly important in rural areas with long travel distances (response times) between resources and incidents. Though this list is not comprehensive, the following agreements help create continuity in response efforts (summaries can be found in [Appendix E](#)):

- Village of Coutts (Alberta, Canada) and Toole County (1997 / updated in 2021)
- Malmstrom Air Force Base and Sunburst Volunteer Fire Department (2021)
- Malmstrom Air Force Base and Shelby Volunteer Fire Department (2023)
- MT DNRC (Cooperative Fire Control and Equipment Agreements) and Toole County (2024)



Figure 4 Sunburst / North Toole County Fire Dept.

2.3. The Wildland Urban Interface

WUI Overview

The concept of the WUI has a variety of definitions ranging widely in detail and extent according to federal, state, and local sources. At its simplest, the WUI has been described as the area where wildland fuels meet human development, representing an area of increased risk to life, property, and infrastructure. However, the definition of the WUI has evolved in various ways to encompass local community characteristics and values. In recent years, the definition of the WUI has been at the forefront of various legal challenges as it relates to federal agencies' use of the streamlined National Environmental Policy Act (NEPA) processes permitted through HFRA. The precedent set by such cases suggests that communities define the WUI according to HFRA requirements, with deviations from this definition clearly justified within the CWPP. These cases have also acknowledged the right of a community to extend the boundaries of the WUI beyond the HFRA WUI requirements to meet their needs, though such deviations must be reasonable and clearly justified.

Defining and delineating the WUI serves to ensure that areas with increased risk to life, property, and infrastructure are appropriately accounted for during decision-making processes. The delineation of the WUI also facilitates access to funding for projects intended to reduce that risk. Per HFRA recommendations, Toole County has updated the WUI to encompass the unique needs of the community and meet the definition of the WUI as defined by HFRA.

WUI Components

The updated Toole County WUI is comprised of the 'Functional WUI' data layer developed by MT DNRC and Pyrologix, LLC. and additional components identified by the Core Team during the CWPP update process (MT DNRC and Pyrologix 2022). Map 1 in [Appendix C](#) displays the extent of the updated WUI.

MT DNRC Functional WUI

The MT DNRC Functional WUI is a 30-meter resolution raster dataset that maps the WUI where structures meet or intermingle with undeveloped wildland vegetation (i.e., burnable land cover greater

than 200 meters from a building centroid). This data layer provides a starting point for WUI designation within a county. Per state statute MCA 76-13-145, the official WUI designation for each county is determined through the completion and/or update of a CWPP. This layer consists of data obtained from the “Structures & Addresses Framework” dataset from the Montana State Library Geographic Information System (GIS) Clearinghouse and fuels information from the calibrated LANDFIRE 2016 Remap (LF 2.0.0) FM40 layer. Land with structures within 200 meters of a building centroid was classified as Direct, Indirect, or Limited Exposure WUI.

- **“Direct Exposure”** WUI is burnable¹ wildland that contains or is near a structure located on or surrounded by burnable land cover. Directly exposed structures could benefit from both the hardening of the structure to resist ignition and the reduction of fuel in the home ignition zone to reduce the structure’s exposure to heat and embers.
- **“Indirect Exposure”** WUI is nonburnable land that contains or is near a structure and is within 900 m of burnable land cover (Caggiano et al. 2020). Indirectly exposed structures could benefit from the hardening of the structure to resist ignition from embers and nearby structures.
- **“Limited Exposure”** WUI is nonburnable land that contains a structure but is greater than 900 m from burnable land cover.
- **“Critical Fireshed”** is the Burnable Land Area within about 1,500 m (1 mile) of a group of structures, dependent on structure density, but does not itself contain structures.
- **“Nonburnable Fireshed”** is the nonburnable land cover within 1,500 m (1 mile) of a group of structures but does not itself contain structures.
- **“Non-WUI”** is all land more than 1,500 m (1 mile) from a group of structures.
- **“Water”** is the portion of the landscape covered by open water.

The Functional WUI map provides a broad overview of where structures are located, what their relative levels of exposure are, and the burnable lands around those structures.

Core Team Determined Additional Components

Additional community resources and critical travelways were identified by the Core Team that could be heavily impacted in the event of a wildfire and are included in the WUI boundary. A more detailed justification for these additions can be found in [Appendix H](#). These resources and their buffers are listed below.

- **Roads Critical to Ingress/Egress** includes segments from the following roads that were not already included in the Functional WUI with a ½-mile buffer (1-mile total width):
 - Aschim
 - Bootlegger Road
 - Coal Mine Road
 - Dean Indian Road
 - Dunkirk Road
 - Galata Road

¹ Nonburnable land cover as defined for the MT DNRC Functional WUI data layer is where the mapped fire-behavior fuel model is 91-99; burnable is all other fuel models.

- Highway 2
- Highway 417
- Interstate 15
- Kevin Highway
- Ledger Road
- Loop Road
- Maggie Ward
- Miners Coulee Road
- Nine Mile Road
- Oilmont Road
- Peterson Road
- Strawberry Road
- Sweetgrass Hills Road
- **Railroads** not included in the Functional WUI with a ½-mile buffer (1-mile total width)
- **Marias River Recreation Sites** not included in the Functional WUI with a ½-mile buffer (1-mile total width)

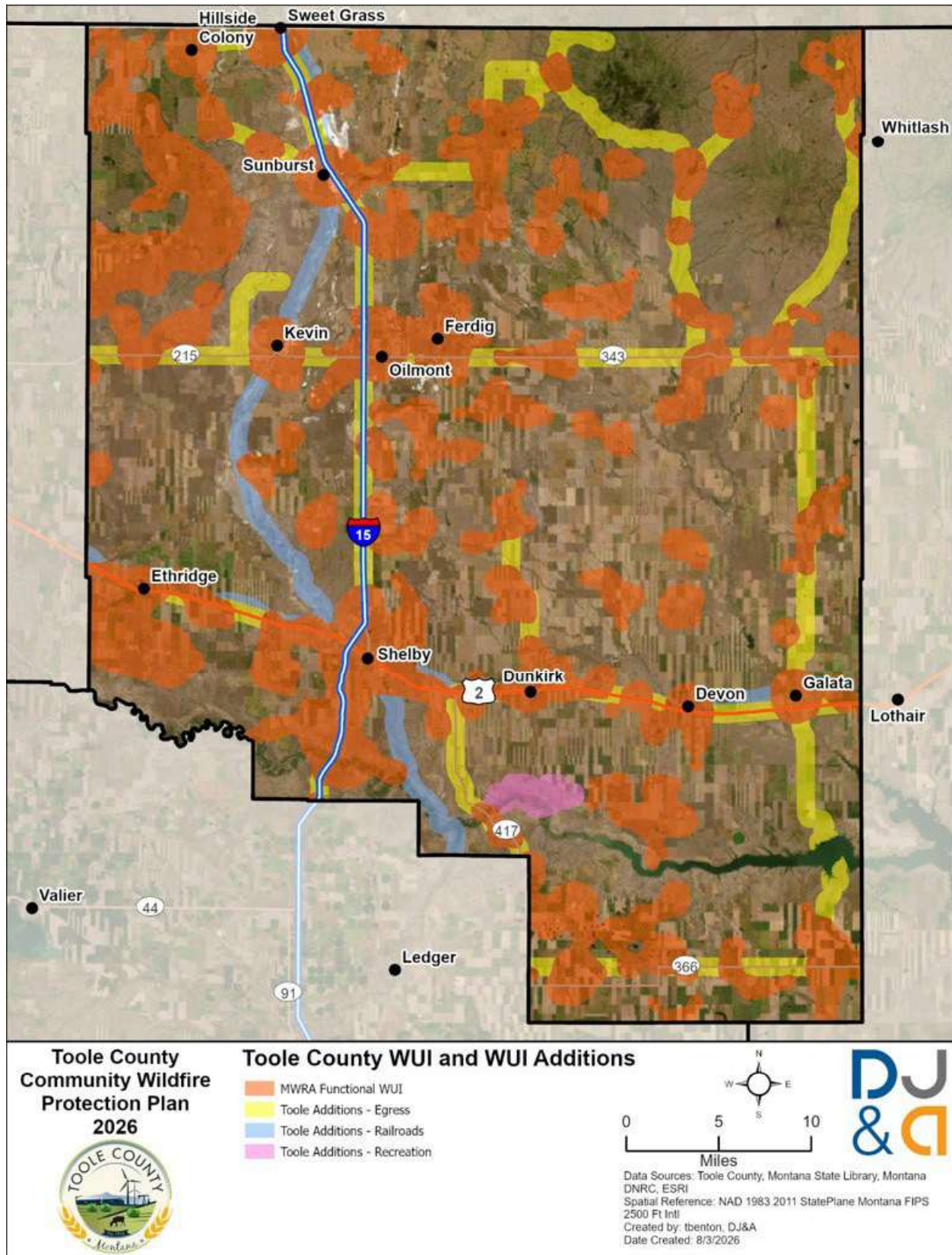


Figure 5 MT DNRC Functional WUI and Toole County Additions

At-Risk Communities

HFRA requires CWPPs to consider at-risk communities in all essential aspects of the plan. As defined in the Act, “at-risk communities” have the following characteristics:

- A group of homes and other structures with basic infrastructure and services;
- Located within or adjacent to federal lands with conditions conducive to large-scale wildfire, and
- Wildfire poses a significant threat to human life or property (16 USC § 6511, Sec. 101(1)).

Per HFRA, all CWPPs must engage at-risk communities throughout the planning process, prioritize fuel projects around these communities, and recommend measures to reduce structure ignitability in these communities (Map 3 in Appendix C). The 2027 CWPP meets these requirements for the four at-risk communities identified in 65 FR 751, ‘Urban Wildland Interface Communities Within the Vicinity of Federal Lands That Are At High Risk From Wildfire’:

- Oilmont,
- Shelby,
- Sunburst, and
- Sweet Grass.

Additionally, the Toole County communities of Devon, Dunkirk, Galata, and Kevin have been acknowledged as “at-risk communities” by the County. These communities meet the characteristics listed above and are included in the WUI boundary, though they are not currently acknowledged by HFRA as “at-risk.”

Underserved Communities

Underserved communities are not explicitly defined within the HFRA, though federal and state guidance offers several metrics which can be implemented to determine if a community is underserved. The Community Wildfire Defense Grant Program highlights areas of “low income” or areas with a social vulnerability score of 0.75 or higher as being qualified for “underserved community” status (Wildfire Risk to Communities Project 2022), with the definition of “low income” in Montana being a household income that is 80%, or less, of the state median household income. At the time of analysis, the social vulnerability score was 0.60 and the state median household income was \$75,340 and the median household income for Toole County was \$57,731 (77% of the state median income) (U.S Census Bureau 2025). Though underserved communities were considered, they were not explicitly included as a separate WUI component as they were already included in other resource buffers. Future updates of the CWPP should continue to consider these communities and incorporate them if necessary.

2.4. Wildfire Risk

Wildfire risk is made up of several components that together characterize the total risk posed to a structure, community, or resource. According to MT DNRC, wildfire risk is “the combination of likelihood and intensity (together called “hazard”) and exposure and susceptibility (together called “vulnerability”)” (MT DNRC 2023b). The relationships of these interrelated concepts are illustrated by Figure 6 below.

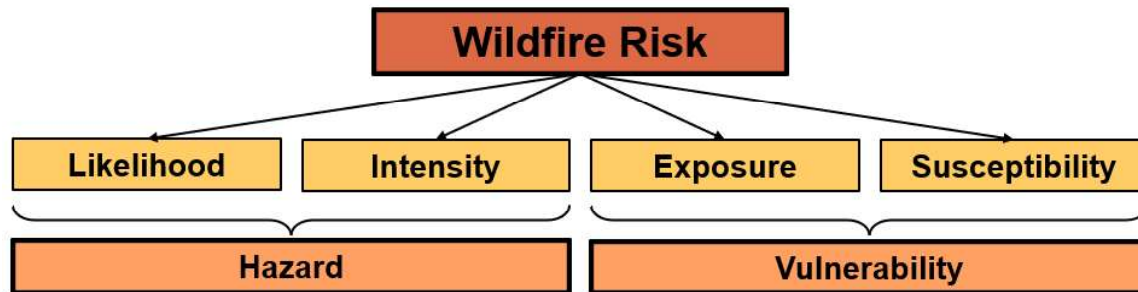


Figure 6 Components of Wildfire Risk

The concept of wildfire hazard is focused on wildlands themselves. Wildfire likelihood is driven by factors such as topography, weather conditions, and potential ignition sources. Wildfire intensity is a measure of the energy expected from a wildfire and is predicted based on total fuel types, fuel load, and topography. Together, likelihood and intensity represent wildfire hazard.

The concept of wildfire vulnerability, meanwhile, is focused on the communities and structures located within or adjacent to wildlands. Homes and structures located in areas where direct or indirect wildfire impacts may occur are considered to be exposed to wildfire. The characteristics and materials of the structures themselves determine the likelihood of damage when exposed to wildfire, known as wildfire susceptibility. Together, wildfire exposure and susceptibility characterize the total vulnerability of communities and associated life and property when a wildfire does occur (MT DNRC 2025).

As a composite of several discrete but interrelated concepts, wildfire risk provides a single key metric for understanding the real-world threat of wildfire to homes, communities, and resources. The Montana Wildfire Risk Assessment (DNRC 2020) used recent LANDFIRE data, historical wildfire occurrence and weather patterns, and wildfire simulations to provide an updated picture of wildfire risk across the state (DNRC 2020). Since its completion, this assessment has been instrumental for counties updating their CWPPs.

Risk Assessment and Community Base Map

Using the best available data and local knowledge and input, the CWPP Core Team developed a community base map for Toole County (Map 8 in Appendix C). Wildfire risk within the Community Base Map was evaluated using data and findings from the Montana Wildfire Risk Assessment (DNRC 2020).

Risk Assessment

The Montana Wildfire Risk Assessment was completed in 2020 by Pyrologix for the MT DNRC (DNRC 2020). This detailed quantitative analysis of wildfire risk across the state of Montana serves as an integral resource for understanding and interpreting wildfire risk throughout Toole County. The MWRA considers various components that contribute to wildfire risk including likelihood of a fire burning, intensity of a fire if one should occur, exposure of assets and resources based on their locations, and the susceptibility of those assets and resources to wildfire. Data outputs related to the MWRA consist of spatially explicit maps and data layers including risk to homes, wildfire threat, wildfire risk, wildfire potential impacts, and fire model inputs and fuelscape, along with numerous supporting data layers. For the purposes of the 2027 CWPP, the CWPP Core Team identified two data sources most relevant and appropriate for characterizing and interpreting wildfire risk within Toole County. These data sources include total wildfire risk (expected net value change (eNVC)) and risk to potential structures (conditional net value change (cNVC)). These data layers serve to

characterize wildfire risk of both current and potential assets and resources throughout Toole County. More information regarding the MWRA along with online maps and resources can be found at the MT DNRC website.²

Wildfire Risk (eNVC)

Total wildfire risk within the MWRA was evaluated through an effects analysis that quantifies wildfire risk as the expected value of net response or eNVC (Map 4 in Appendix C). To evaluate wildfire risk, the MWRA characterized anticipated response of identified, mapped highly valued resources and assets (HVRAs) should they be exposed to wildfire. The anticipated response was then translated into a measure of total wildfire risk across Toole County as it relates to these identified HVRAs.

Risk to Potential Structures (cNVC)

Risk to potential structures is also referred to as ‘Hazard in Context’ within the MWRA and represents an integration of wildfire likelihood and intensity with generalized consequences or responses to a home everywhere a fire should occur. This metric is useful as it can “predict” the risk of both future and current homes by evaluating the wildfire risk if a home were to occur at any point across the landscape (Map 5 in Appendix C). Response of these hypothetical homes to wildfire is assumed to be negative with the degree of damage correlated with increasing wildfire intensity.

Response Time Analysis

Large rural counties, such as Toole County, face a specific challenge when responding to fires or other emergencies. Areas of the County can be difficult to access in a timely manner due to distance from a fire station, road conditions, and lack of roads. Increased response times generally place structures at higher wildfire risk when all other factors are equal. Consequently, response times were considered in quantifying areas of higher risk of wildfires in Toole County. Using ESRI’s Business Analyst, a drive time analysis was performed for the Shelby and Sunburst Fire Stations. The drive time analysis considered road networks, road surfaces, and speed limits and created polygons for what areas can be reached in a 15-, 30-, or 45-minute timeframe (Map 6 in Appendix C).

U.S. Forest Service Strategic Analytics Branch

The CWPP Core Team employed recent data released by the U.S. Forest Service Strategic Analytics Branch (SAB) to further inform Toole County of risks to aid in wildfire mitigation planning. These data were developed to empower the wildland fire community in analytics, strategic planning, and risk-informed decision support to improve firefighter safety and management efficiency and effectiveness. More information, along with online maps and resources, can be found at the Risk Management Assistance (RMA) website.³ Though these analytics have been developed as tools for wildland firefighters, risk information can be extended further to the larger community and help to inform decisions in wildfire mitigation and planning. For this purpose, three key analytics were used by the CWPP Core Team to develop maps for Toole County that include the WUI (Maps 9-11 in [Appendix C](#)) and are described below.

Firefighter Estimated Ground Evacuation Time (GET)

Wildland firefighters and outdoor recreationists are often in remote settings with multiple hazards that can cause life-threatening injuries. Prompt access to medical care is key to reducing injury consequences. Originally developed in 2013, the firefighter estimated ground evacuation time (GET) model is a spatially explicit quantification of ground evacuation time to the nearest relevant medical facility (Map 9, Appendix C), which is designed to help evaluate potential firefighter safety risks and inform safe and effective fire response strategies (Campbell et al. 2024). This spatial model of

² <https://mwra-mtdnrc.hub.arcgis.com/>

³ [RMA Dashboard | Strategic Analytics Branch](#)

wildland firefighter estimated GET has been used when developing operational response strategies in the contiguous United States.

Potential Control Location Suitability (PCL)

During active fire incidents, decisions regarding where and how to safely and effectively deploy resources to meet management objectives are often made under rapidly evolving conditions, with limited time to assess management strategies or for development of backup plans if initial efforts prove unsuccessful. Topography and fuels are significant factors affecting potential fire spread and burn severity. The Potential Control Location Suitability (PCL) uses these relationships to quantify the effects of topography, fuel characteristics, road networks, and fire suppression effort to develop a predictive model of potential fire control locations spanning a range of fuel types, topographic features, and natural and anthropogenic barriers to fire spread (O'Connor, Calkin, and Thompson 2017). This spatial model of PCL (Map 10, Appendix C) has been used to reduce unnecessary exposure for fire responders, coordinate pre-fire planning for operational fire response, and as a network of locations to incorporate into spatial fire planning to better align fire operations with land management objectives in the contiguous United States.

Wildfire Suppression Difficulty Index (SDI)

The Wildfire Suppression Difficulty Index (SDI) model integrates potential fire behavior, vegetation cover types, topography, road and trail networks, existing fuel breaks, and fireline production potential to map the operational effort necessary for fire suppression (Map 11 in Appendix C). SDI models have been used to assess the effects of fuel breaks and other landscape treatments on the future operating environment and as an aid for identifying safer control opportunities (Rodriguez y Silva et al. 2020). In summary, the aim of this model is to reduce the uncertainty and increase the efficiency of suppression operations through assessment of landscape conditions and incorporation of expert knowledge into planning in the contiguous United States.

Section 3: Implementation

3.1. Integrating the National Cohesive Strategy

The Federal Land Assistance, Management, and Enhancement Act of 2009 (FLAME) aimed to provide improved resources and funding opportunities for wildfire suppression on federal lands (43 USC § 1748). As part of this effort, Congress required the development of a cohesive strategy to ensure nationwide consistency of wildfire management on federal, state, local, and tribal lands. Known simply as the National Strategy, it was developed cooperatively by a wide variety of governments and land management agencies, wildfire experts, and public stakeholders. The National Strategy guides wildfire planning efforts by establishing core guidelines to be used when developing CWPPs and emergency responses, prioritizing projects, and educating and equipping the public to protect their property from wildfire.

The National Cohesive Strategy focuses on three goals:

- Restoring and Maintaining Resilient Landscapes,
- Fire Adapted Communities, and
- Safe and Effective Wildfire Response.

The interdisciplinary team incorporated each of these national priorities when preparing the CWPP, thereby ensuring consistency with the National Strategy. The result is a CWPP that prioritizes healthy and functional ecosystems through treatment activities, equips property owners with the knowledge and resources to protect their homes against wildfire, and identifies wildfire response capacity.

Restore and Maintain Resilient Landscapes

Though a natural and essential component of the ecosystem, the role of wildland fire has been altered through fire suppression, changing climatic conditions, declining forest health, increasing human activity, and human development and alteration of the landscape. These changes have resulted in conditions that reduce landscape resiliency and increase the potential for increased wildfire activity and severity. Landscape restoration through proactive management enhances resiliency and promotes healthy, safe, and natural fire activity across the landscape to maintain the beneficial ecological impacts of wildfire while mitigating risk. Once restored, ongoing maintenance through management is essential to perpetuate healthy, resilient landscapes.

Restoration and maintenance on the landscape can be achieved through various management actions related to vegetation and fuels including prescribed fire; managing wildfire for resource objectives; and mechanical, biological, and chemical fuels treatments. Mechanical, biological, and chemical fuels treatments include thinning, commercial harvest, slash and underburning, slash and pile burning, herbicide application, reseeding, replanting, and more. Given the scale of fuels treatments needed to restore resilient landscapes, prioritization is critical to allocate resources effectively. These various treatment types can be implemented in priority areas where feasible and sustainable to reduce wildfire risk, improve ecological conditions, and achieve fire adapted and resilient landscapes.

Fire Adapted Communities

The National Wildfire Coordinating Group (NWCG) defines a fire adapted community as a community that “takes mitigation actions so they can live with wildfire without harm and without extensive wildfire suppression efforts” (USFS 2023). Promoting fire adapted communities focuses on adaptation through fire mitigation strategies, public education, and applicable policies and regulations. Fire mitigation strategies may include using fuel treatments and individual homeowner action to help protect life and property during a wildfire event. Public education and outreach about wildfire

preparedness can help the public understand their role in promoting fire adapted communities and protecting private property. Updating policies and regulations like building and subdivision codes can increase fire resilience for future development.

Living with Fire

Building fire adapted communities is a constantly evolving process that includes taking actions to reduce the risk of wildfire, educating residents about becoming fire adapted, and designing tools that support the community. Fire is a natural part of the ecosystem, and communities at risk can take steps to reduce negative impacts when wildfires occur.

One step homeowners can take to become more fire adapted is reducing the ignition potential of their home and the 100-200 feet of area surrounding it, called the Home Ignition Zone (HIZ). This involves home hardening (using ignition resistant construction materials and techniques) and maintaining adequate defensible space within the HIZ through management of vegetation and other combustible materials on the property. An ignition-resistant HIZ reduces the risk of loss by creating a home and property that is better able to defend itself from wildfire. The National Fire Protection Association's Firewise Program provides guidelines that help inform homeowners about specific actions for home hardening and HIZ treatments. The MT DNRC provides free wildfire risk home assessments to all Montana homeowners that include a wildfire risk rating as well as recommendations for specific actions homeowners can take to reduce their vulnerability to wildfire.

Recommendations to Reduce Structural Ignitability

Resource managers reduce the risk of wildfire damage to private property through fuel reduction projects on state and federal lands, establishing fuel breaks and buffers, and wildfire suppression. However, property owners are responsible for helping create fire adapted communities by reducing the structural ignitability of their own property. In many cases, these efforts incorporate the same techniques used by local, state, and federal resource managers.

Measures to reduce structural ignitability vary from property to property depending on parcel size, structure location, building age, construction materials, existing vegetation and fuel loads, access to water, and more. Despite property-level variation, the same basic concepts apply in all cases.

Fire propagation requires fuel. Reducing the ignition potential within the HIZ, with priority given to the home/structure and the first five feet surrounding it, is the most effective way for structures to withstand wildfires. One of the most common ways that homes catch fire is by wind-driven embers which can travel up to a mile away from active wildfires and ignite buildings by landing on flammable exterior materials, or indirectly by igniting flammable vegetation or materials located close to the home, resulting in direct flame contact or radiant heat exposure to the home (Restiano et al. 2020). As such, property owners can reduce structural ignitability by preventing flames and embers from accessing fuels within the building itself, a technique known as "hardening." Implementing hardening and creating ignition resistant homes and properties, collectively, saves homes and creates fire adapted communities. Common techniques for reducing structural ignitability include:



Building or retrofitting structures with ignition resistant materials and techniques (i.e., Class A roofing, ignition resistant siding, boxed eaves, covered gutters, metal gutters kept clear of debris, screened vents, etc.



Keeping the area 5-30 feet from the home clean and green by providing adequate spacing between trees, removing ladder fuels and ground litter, keeping vegetation healthy and hydrated, and using walkways, patios, or driveways to create fuel breaks.



Maintaining a non-combustible zone within five feet surrounding the home by removing all flammable materials and vegetation, using ignition resistant ground cover and sparsely placed fire adapted plants if vegetation is desired.



Clearing flammable materials away from propane tanks and firewood stacks and ensuring that both are located at least 25 feet away from the home.



Pruning trees up to 6-10 feet up, or as species allows, from the base of the tree and keeping lawns well-watered and mowed.

Homeowner Resources

Because each property is unique, organizations such as Firewise USA;⁴ Ready, Set, Go!;⁵ Keep Montana Green;⁶ and the Fire Adapted Learning Network⁷ provide resources to help residents determine the best options for reducing structural ignitability. These resources include further reading and recommendations, illustrations, step-by-step guides, evacuation checklists, and more that can be used when planning, completing projects, or discussing wildfire preparedness within a community.

MT DNRC

The MT DNRC provides **free** wildfire risk home assessments to all Montana homeowners that include a wildfire risk rating as well as recommendations for specific actions homeowners can take to reduce their vulnerability to wildfire. The MT DNRC also provides guidance for homeowners interested in mitigating wildfire risk within their communities including suggestions for home hardening, evacuation planning, and reducing ignition potential. More information can be found on MT DNRC webpages.^{8,9}

Grants and Funding

There are several opportunities for grants and funding available to communities and organizations to promote fire adapted communities. Although there is not currently a grant program available to assist individual homeowners with home hardening, local governments can use grant funds to support the

⁴ <https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA>

⁵ https://www.wildlandfirersg.org/s/?language=en_US

⁶ <https://www.keepmontanagreen.com/>

⁷ <https://fireadaptedmontana.org/>

⁸ <https://dnrc.mt.gov/Forestry/Wildfire/fire-prevention-and-preparedness>

⁹ <https://www.mtfireinfo.org/pages/prevention>

development of programs that serve this purpose in addition to providing funding for projects that mitigate wildfire risk on adjacent federal and state lands. Grant funding is available to private landowners for fuels reduction through the DNRC Hazardous Fuels Reduction Grant.¹⁰ Additionally, there are several grants available through the MT DNRC for local governments to increase fire response capacity, such as the Cooperative Fire Protection Capacity Grant and the Rural Fire Capacity Grant. Having an updated CWPP allows Toole County to access more funding sources, including the Community Wildfire Defense Grant, to increase wildfire preparedness and mitigate wildfire risk (MT DNRC 2023a). An extended list of grants and funding sources can be found in [Appendix F](#).

Education and Outreach

Wildfire mitigation strategies are most effective when there is robust participation from all stakeholders. It is important to engage the community through education and outreach to mitigate the human hazards of wildfire. Public education campaigns such as Ready, Set, Go! and Firewise USA bring communities together to prepare for wildfire. Becoming a Firewise USA community gives residents access to resources, funding, and community support (Firewise USA 2022). There are currently no Firewise USA communities in Toole County, but residents can take action to organize a Firewise community at any time (Firewise USA 2022).

Safe and Effective Wildfire Response

One of the most important roles of a CWPP is to identify wildfire response capacity and processes. The interdisciplinary team that developed the CWPP included members of the Toole County Office of Emergency Management, community preparedness and wildfire prevention specialists, and both federal and local fire department representatives. As a result, the CWPP has identified specific strategies to increase wildfire response capacity and improve communication across various resource groups.

Preparation and Prevention

In Toole County, wildfire preparation and prevention activities are a cooperative effort among city, county, state, federal, and tribal agencies. Fire preparedness actions may include public education, home hardening, clearing of the home ignition zone, or planning for evacuation. Fire prevention actions include campaigns to educate the public about the dangers of human-caused fires and risk reduction measures such as fire restrictions or burn bans. Although fire is a natural part of the ecosystem, some fires may pose a threat to human life or property. The CWPP facilitates the development of new programs to support wildfire preparedness and prevention throughout the County.

Mobilization

When a wildfire occurs in the County, a response crew is mobilized. Response crews are mobilized based on several factors, including the location of the fire and availability of resources. Local fire departments and volunteer fire departments are mobilized through the Toole County Dispatch.

Emergency Management

The Central Montana Regional Hazard Mitigation Plan (2024) provides a detailed overview of how the County has planned to respond to emergencies ranging from flood to wildfire. Within the plan, an evacuation strategy is outlined which can include both sheltering in place or evacuations from a defined area, such as would apply in the case of a wildfire event. Coordination of firefighting, emergency medical services, and technical rescue activities in the event of an emergency such as wildfire is also outlined within the plan. The Emergency Management website also provides extensive

¹⁰ <https://dnrc.mt.gov/Grants-and-Loans/>

resources to help individuals throughout the County learn more about available resources and proactively plan for emergency events.¹¹

Post-Fire

Recovering from wildfire is a difficult task for communities. Homes, businesses, and other community assets may have been lost or damaged during the fire. Residents returning to their homes may face significant property damage, even if the home did not burn. Soil in burned areas can be unstable, often resulting in landslides or flash flooding. Post-fire recovery planning helps mitigate safety hazards to the community and identifies resources to help residents recover from wildfire. Although the County does not currently have a post-fire recovery plan, the CWPP promotes the development of a plan along with other public education and wildfire response strategies. To aid communities following a disaster, Montana Disaster and Emergency Services has compiled a list of resources to assist individuals dealing with the aftermath of a disaster event.¹²

3.2. Implementation

Goals, Objectives, and Strategies

The CWPP implementation plan ([Appendix A](#)) and associated action table ([Appendix B](#)) were developed to clearly outline roles, responsibilities, and timelines for various projects that will facilitate the implementation and achievement of the goals, objectives, and strategies outlined within the CWPP. The CWPP defines goals, objectives, and strategies as follows:

Goal: A broad, long-term desired result.

Objective: A measurable, specific action that serves to achieve a **Goal**.

Strategy: A method to achieve a specific **Objective**. Multiple **Projects** can be related to a given Strategy.

Action Plan

The action plan consists of various projects with assigned types, responsibilities, and timeframes. Using the National Strategy priorities (Restoring and Maintaining Landscapes, Fire-Adapted Communities, and Response to Wildfires) as overarching goals, the Core Team, with public input, developed objectives to further specify each goal. Each objective is then expanded to include one or more methods that can be planned and implemented, called strategies. Each strategy involves at least one stakeholder but often requires the collaborative efforts of multiple interested stakeholders from the County, federal and state agencies, local fire departments, and other entities. Other stakeholder groups may be integrated into the action plan ([Appendix B](#)) as new strategies are developed in the coming years and roles are further defined. Wherever possible, timelines to complete each strategy are included within the action table to best capture the overarching timeline to facilitate achievement of larger goals and objectives defined for the CWPP.

Monitoring

To accurately and consistently monitor progress towards the goals, objectives, and strategies outlined in the CWPP, an annual review of the action plan should be conducted during which any completed strategies will be updated and any pending additions or revisions to the CWPP document or the associated CWPP StoryMap will be implemented. The annual review will also consider substantive changes to other plans, policies, and regulations identified in [Section 1.2: Relationship to Other Plans, Policies, and Regulations](#) (e.g., updates to the Montana Forest Action Plan) and/or

¹¹ <https://toolecountymt.gov/disaster-and-emergency-relief/>

¹² <https://des.mt.gov/Recovery/Recovery-Program>

substantive changes to data used to develop the WUI and risk assessment for this CWPP identified in [Section 2: Wildland Urban Interface and Risk Assessment](#). Projects identified in the action plan should be reviewed annually to track progress and provide further guidance in their implementation using the Project Monitoring Form ([Appendix B](#)). In order to remain relevant and useful, CWPPs should be fully updated every five years. The next CWPP update should occur in 2032 (MT DNRC 2022).

Prioritization Process

This CWPP identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types of treatments that will protect one or more at-risk communities and essential infrastructure.

A GIS analysis was completed to determine a spatial representation using a combination of four risk layers (Risk to People and Property; Risk to Critical Infrastructure; Risk to Potential Structures; and Fire Department Response Times). These layers were intersected to form a composite matrix that assigns “weight” or “points” to aid prioritization. The following formula was used: Risk to People and Property or Risk to Critical Infrastructure (0-7) (whichever integer is higher) + Risk to Potential Structures (0-7) + Response Times (3-12). The results ranged from 3 to 26 and were grouped as follows to categorize composite risk, with higher composite risk corresponding to higher recommended prioritization:

- Very Low = 3 to 5
- Low = 6 to 8
- Moderate = 9 to 12
- High = 13 to 18
- Very High = 19 to 26

Using these values, a spatial layer was developed to show prioritization across the WUI. This spatial mapping of priorities will allow Toole County to interpret which areas should be prioritized and which management actions are appropriate. Priority levels are shown as very low, low, moderate, high, and very high based on the Risk Assessment and Fire Department Response Times intersections (see Map 8 in [Appendix C](#)).

3.3. Future Actions

The 2027 CWPP is designed to function as a living document with updates occurring as needed. It is anticipated that additional goals, objectives, and strategies will be added as conditions and needs change for Toole County, and that the format of the action plan will facilitate easy integration of these elements.

References

- Caggiano, Michael D., Todd J. Hawbaker, Benjamin M. Gannon, and Chad M. Hoffman. 2020. "Building Loss in WUI Disasters: Evaluating the Core Components of the Wildland-Urban Interface Definition." *Fire* 3 (4).
- Campbell, Michael J., Benjamin M. Gannon, Obaidur Rahman, Richard D. Stratton, and Philip E. Dennison. 2024. "Wildland Firefighter Estimated Ground Evacuation Time Modeling to Support Risk-Informed Decision-Making." *Fire*. <https://doi.org/10.3390/fire7080292>.
<https://www.mdpi.com/2571-6255/7/8/292>.
- Central Montana Tourism Office. 2025. "Toole County, Montana." <https://centralmontana.com/counties/toole/>.
- DNRC, MT 2020. *Montana Wildfire Risk Assessment: Methods and Results*.
- Firewise USA. 2022. "How to Become a Firewise USA site." Accessed 7/27.
<https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA/Become-a-Firewise-USA-site>.
- Iowa State University. 2026. Shelby Station Wind Rose. edited by Iowa Environmental Mesonet.
- LANDFIRE. 2023a. Existing Vegetation Type.
- . 2023b. Fire Behavior Fuel Model 40.
- Menard, S., and K. Kindscher. 2015. "Northwestern Great Plains Mixedgrass Prairie." International Terrestrial Ecological System. Accessed 2/26.
https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.722984/Northwestern_Great_Plains_Mixedgrass_Prairie.
- Montana Cadastral. 2025. Montana State Library.
- Montana State Library. 2004. Wind Speed Toole County, Montana. Natural Resource Information System.
- MSU Extension. 2023. *MSU Extension Toole County*.
<https://www.montana.edu/extension/toole/index.html>.
- MT Department of Labor & Industry. 2024. *Economic Overview of Toole County*.
- MT DNRC. 2022. Community Wildfire Protection Plan Guidebook. In *A Roadmap to an Updated, Modernized CWPP*, edited by Fire Protection Bureau.
- . 2023a. *Forestry Assistance Bureau Forest Stewardship Grants*.
https://dnrc.mt.gov/Forestry/Grants/Stewardship-RFP-2023_Final.pdf.
- . 2023b. *Understanding the Components of Wildfire Risk*. The Montana Department of Natural Resources and Conservation. <https://mwra-mtdnrc.hub.arcgis.com/pages/learn>.
- . 2025. "Understand Risk." <https://wildfirerisk.org/understand-risk/>.
- MT DNRC, and LLC. Pyrologix. 2022. "MT DNRC Functional WUI." 2022.
- NatureServe. 2026. "Northern & Central Great Plains Ruderal Exotic Grassland & Shrubland." [https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.881407/Poa_pratensis -
Phleum pratense -
Cirsium arvense Northern Plains Ruderal Grassland Shrubland Group](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.881407/Poa_pratensis_-_Phleum_pratense_-_Cirsium_arvense_Northern_Plains_Ruderal_Grassland_Shrubland_Group).
- NIFC. 2025. "InFORM Fire Occurance Data Records" <https://data-nifc.opendata.arcgis.com/maps/inform-fire-occurrence-data-records>.
- NRCS. 2015. *National Resources Inventory (NRI) Glossary*.
https://www.nrcs.usda.gov/sites/default/files/2022-10/NRI_glossary.pdf.
- NWCG. 2023a. *Fire Behavior-Rate of Spread*. <https://www.nwcg.gov/course/ffm/fire-behavior/83-rate-of-spread>.
- . 2023b. "NWCG Glossary of Wildland Fire, PMS 205." 2023 08/31.
- . 2024. "Fire Behavior Field Reference Guide, PMS 437." National Wildfire Coordinating Group. Accessed 2/26. <https://www.nwcg.gov/publications/pms437/fire-behavior-field-reference-guide-pms-437>.

- O'Connor, Christopher D., David E. Calkin, and Matthew P. Thompson. 2017. "An Empirical Machine Learning Method for Predicting Potential Fire Control Locations for Pre-Fire Planning and Operational Fire Management." *International Journal of Wildland Fire* 26: 587-597.
https://www.fs.usda.gov/rm/pubs_journals/2017/rmrs_2017_oconnor_c002.pdf.
- Prism Climate Group. 2025. Toole County Time Series. Northwest Alliance for Computational Science and Engineering.
- Restiano, Christina, Susan Kocher, Nicole Shaw, Steven Hawks, Carlie Murphy, and Stephen L. Quarles. 2020. "Wildfire Home Retrofit Guide."
https://drive.google.com/file/d/1nCnVeQRq_b0oUxHuEUPIVNzc1vJ6iYj4/view.
- Rodriguez y Silva, Francisco, Christopher D. O'Connor, Matthew P. Thompson, Juan Ramon Molina Martinez, and David E. Calkin. 2020. "Modelling suppression difficulty: Current and future applications." *International Journal of Wildland Fire*.
https://www.fs.usda.gov/rm/pubs_journals/2020/rmrs_2020_rodriguez_silva_f002.pdf.
- Scott, Joe H, and Robert E. Burgan. 2005. *Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model*. (USFS Rocky Mountain Research Station). https://www.fs.usda.gov/rm/pubs_series/rmrs/gtr/rmrs_gtr153.pdf.
- The Montana Forest Action Advisory Council, and MT DNRC. 2020. "Montana Forest Action Plan." December 2020.
- Toole County. 2026. "Toole County Montana." <https://toolecountymt.gov/>.
- U.S Census Bureau. 2025. *QuickFacts*.
<https://www.census.gov/quickfacts/fact/table/toolecountymontana/PST045225>.
- US DOI, and USDA. 2014. "The National Strategy: The Final Phase in the Development of the National Cohesive Wildland Fire Management Strategy."
- . 2023. "National Fire Plan." <https://www.forestsandangelands.gov/resources/overview/>.
- USDA. 2020. *Inter-Mountain Basins Mat Saltbush Shrubland*.
https://research.fs.usda.gov/sites/default/files/feis/bps/10660_16_23_24.pdf.
- . 2023. "Fire Effects Information System Glossary." Accessed 08/31.
<https://www.fs.usda.gov/database/feis/glossary2.html>.
- USFS. 2023. "Fire Adapted Communities." Accessed 7/27. <https://www.fs.usda.gov/managing-land/fire/fac>.
- Vermulm, Misty. 2020. *Toole County NRCS Long Range Plan*. Shelby Field Office, (NRCS).
<https://www.nrcs.usda.gov/sites/default/files/2022-10/Toole-Long-Range-Plan-2020.pdf>.
- Wildfire Risk to Communities Project. 2022. "Community Wildfire Defense Grant Risk Dataset: Methods and Intended Uses." August 16, 2022, Community Wildfire Defense Grant Program.
- Wildland Fire Leadership Council. 2023. "National Cohesive Wildland Fire Management Strategy Addendum Update."
- WSP. 2024. *Central Montana Regional Hazard Mitigation Plan*. (MTDES).

Appendices

Appendix A: Implementation – Goals, Objectives, and Strategies	A-1
Appendix B: Implementation – Action Table and Project Monitoring Form	B-1
Appendix C: Maps.....	C-1
Appendix D: Fire Department Resources	D-1
Appendix E: Cooperative Agreements.....	E-1
Appendix F: Potential Funding Sources.....	F-1
Appendix G: Glossary of Terms	G-1
Appendix H: Wildland Urban Interface Summary Table.....	H-1

Appendix A: Implementation – Goals, Objectives, and Strategies

Goal: A broad, long-term desired result

Objective: A measurable, specific plan that serves to achieve a **Goal**

Strategy: A method to achieve specific **Objectives**. Multiple **Projects** can relate to a given **Strategy**.

Goal 1: Restore and Maintain Landscapes

Objective 1.1 Reduce fuel loading by supporting and implementing fuels treatments

Strategy 1.1.1 Implement the following fuels treatments to accomplish resource objectives: thinning, prescribed fire, commercial harvest, slashing, underburning, pile burning, chipping, thinning, prescribed/targeted grazing on both publicly and privately owned land

Objective 1.2 Promote characteristic wildfire activity appropriate to natural fire regimes and resource objectives

Strategy 1.2.1 Identify strategic locations for new fuel breaks and buffers

Strategy 1.2.2 Improve and maintain existing fuel breaks and buffers

Strategy 1.2.3 Identify, improve, and maintain road buffers

Strategy 1.2.4 Facilitate and maintain cross-boundary collaboration to implement fuels reduction projects across multiple jurisdictions including privately held lands

Strategy 1.2.5 Implement treatments that promote characteristic wildfire activity on the landscape

Objective 1.3 Implement post-fire recovery activities

Strategy 1.3.1 Support the implementation of recovery and restoration activities such as reseedling and replanting following wildfire events

Strategy 1.3.2 Support the development and implementation of a Toole County Post-Fire Recovery Plan that provides a framework for efficient and effective allocation of resources after a wildfire event

Strategy 1.3.3 Increase local capacity for post-fire response personnel and resources

Objective 1.4 Reduce insect and disease outbreaks and spread

Strategy 1.4.1 Support and implement projects that use approved methods to control insects and disease such as: micronutrients, pesticides, attractants, aggregants, anti-aggregants, and pheromones

Strategy 1.4.2 Thin fuels to prevent the spread of insects and disease outbreaks

Strategy 1.4.3 Monitor Aerial Surveys to detect trends in outbreaks

Objective 1.5 Use the best available science to inform CWPP goals, objectives, and strategies

Strategy 1.5.1 Facilitate the collection and/or analysis of updated data such as aerial imagery, surveys, etc. that would improve the implementation of projects associated with this CWPP

Goal 2: Fire Adapted Communities

Objective 2.1 Improve and maintain public education to reduce wildfire risk and structural ignitability

Strategy 2.1.1 Improve public access to existing educational resources

Strategy 2.1.2 Develop new educational opportunities/programs for residents

Strategy 2.1.3 Support and implement efforts to increase capacity for additional personnel, groups, or programs to implement and coordinate services that support fire adapted communities within the County

Strategy 2.1.4 Provide an updated platform for public access to CWPP resources that integrates with existing resources

Strategy 2.1.5 Establish a CWPP Monitoring Committee to ensure that the CWPP remains updated, relevant, and is communicated effectively among stakeholders

Objective 2.2 Support and implement mitigation treatments within priority areas within the County

Strategy 2.2.1 Continue to develop projects within the WUI and priority areas within the County

Objective 2.3 Reduce human-caused ignitions

Strategy 2.3.1 Work with utility companies to reduce ignition risk and identify opportunities for mitigation

Strategy 2.3.2 Improve and maintain public communication to reduce human-caused ignitions

Strategy 2.3.3 Provide training and resources for using prescribed fire on private lands

Goal 3: Wildfire Response

Objective 3.1 Increase/improve water supply for fire suppression

Strategy 3.1.1 Identify additional existing water resources

Strategy 3.1.2 Support the implementation of design alternatives that improve fire suppression and response capabilities within subdivision planning documents

Strategy 3.1.3 Construct additional water resources for fire suppression

Objective 3.2 Improve emergency notification and information communications

Strategy 3.2.1 Identify methods to increase communication efficacy and accessibility in the event of a wildfire

Strategy 3.2.2 Ensure communication and notification methods are inclusive of vulnerable populations

Strategy 3.2.3 Support the development of mitigation actions and planning related to wildfire smoke public health issues

Strategy 3.2.4 Consider wildfire smoke responses in future planning efforts

Strategy 3.2.5 Support the procurement and designation of funding to mitigate public health risks and issues related to wildfire smoke

Objective 3.3 Facilitate and maintain cross-boundary collaboration to improve wildfire response efforts

Strategy 3.3.1 Coordinate with neighboring agencies, landowners, and tribes to identify potential opportunities for collaboration

Strategy 3.3.2 Support the Fire Council Group to improve communications and collaborative response efforts across groups and jurisdictions

Objective 3.4 Improve emergency response and mobilization efforts

Strategy 3.4.1 Develop an evacuation plan that identifies evacuation routes, reception/distribution areas, shelter locations, staging areas, and access control points

Objective 3.5 Increase response capacity

Strategy 3.5.1 Obtain funding for additional personnel, training, and equipment to improve wildfire response capacity and efficacy

Appendix B: Implementation – Action Table and Project Monitoring Form

Table 6 Toole County Community Wildfire Protection Plan Update Action Plan

Project Name	CWPP Goal Goal 1: Restore and Maintain Landscapes Goal 2: Fire-adapted Communities Goal 3: Wildfire Response	Responsible Entity	CWPP Strategy	Estimated Date of Completion	Notes
Ongoing Projects					
Ingress/Egress Road Condition Assessment and Improvement	Goals 1 and 3	Toole County	1.2.3 and 3.5.1	Ongoing	Identify and assess critical ingress/egress routes in coordination with Toole County Road and Bridge Department.
Public Engagement Programs	Goal 2	DNRC leading with County (and other agencies)	2.1.1, 2.1.2, and 2.1.3	Ongoing	Communicate the importance of the HIZ to the public by using existing events to share the message or plan for one annual event to discuss wildfire preparedness. Implement education and outreach programs to further engage and educate County/City residents, particularly those living in the WUI, on reducing wildfire risk and increasing adaptation to wildfire.
Proposed Projects					
Create Post-Fire Plan	Goals 2 and 3	County (and other agencies)	1.3.2	2027 – Ongoing	Establish a Post Fire Recovery Team that will create and maintain a post fire resource and action plan.
Large and Small Animal Sheltering Plan	Goal 3	Toole County, Fair Board, Local Veterinarians	3.4.1	New in 2023	Toole County doesn't have a written plan for sheltering large or small animals during a disaster. Having a plan would help provide guidance and

Project Name	CWPP Goal Goal 1: Restore and Maintain Landscapes Goal 2: Fire-adapted Communities Goal 3: Wildfire Response	Responsible Entity	CWPP Strategy	Estimated Date of Completion	Notes
					structure. The Fairgrounds outside of the City of Shelby could provide shelter for both small and large animals due to its large area and stalling capability. This could be funded by the County General Fund, Toole County DES, and local donations.
Fire Suppression Equipment for Farm Equipment	Goal 3	Toole County and Fire Departments	3.5.1	2027 – Ongoing	Make bulk purchase of fire extinguishers and sell at cost to farmers for use on farm equipment.
West Butte Forest Fire Fuel Reduction	Goals 1 and 3	Toole County Fire, BLM, DNRC, and Private Landowners	1.1.1, 1.2.4, and 1.2.5	2027 – Ongoing	Clear and reduce flammable debris including but not limited to beetle kill trees, fallen trees, and dense timber to reduce the potential loss during a wildfire event.
Power generator for Sunburst Fire Station	Goal 3	Toole County and Fire Departments	3.5.1	2027 - Ongoing	
Private road identification and planning	Goal 3	Toole County Fire Departments	3.3.1	2027 - Ongoing	Identify private roads needed for fire response and develop a plan with property owners for emergency access.
Improve rural signage including road and fire district boundary markers throughout the county	Goal 2 and 3	Toole County	3.4.1	2027 - Ongoing	Improve road and fire district signage to support emergency access, navigation, and evacuation.

Project Name	CWPP Goal Goal 1: Restore and Maintain Landscapes Goal 2: Fire-adapted Communities Goal 3: Wildfire Response	Responsible Entity	CWPP Strategy	Estimated Date of Completion	Notes
Begin making formal requests to Rocky Boy North Central Montana Regional Water Authority's board to include hydrants at strategic points along the main water line	Goal 3	Toole County and South Toole County Fire Dept.	3.1.3	2027 - Ongoing	Coordinate with the Water Authority to identify strategic locations for additional fire suppression hydrants along the main water line.
Fuels reduction along the Marias River and Lake Elwell	Goal 1	Bureau of Reclamation, Toole County	1.1.1	2027 - Ongoing	Implement a fuels reduction program to include recreation areas and roadsides that access the Marias River and Lake Elwell.
Consider a Toole County supported program for the restoration of dead and/or dying shelterbelts	Goal 1	Toole County Conservation District	1.4.2	2027 - Ongoing	Support treatment and restoration of dead or dying shelterbelts to reduce hazardous fuels and improve landscape resilience.
Continue to update and add to existing Transportation Plans	Goal 2 and 3	Toole County DES	2.1.3 and 3.4.1	2027 - Ongoing	Incorporate wildfire evacuation routes, emergency access needs, and other response considerations into transportation planning.

Project Name	CWPP Goal Goal 1: Restore and Maintain Landscapes Goal 2: Fire-adapted Communities Goal 3: Wildfire Response	Responsible Entity	CWPP Strategy	Estimated Date of Completion	Notes
Create and maintain defensible space around critical infrastructure	Goal 1	Toole County Road Department, City Public Works Departments, Toole County Fire Depts, MT DNRC, BLM, and BNSF Railroad	1.1.1	2027 - Ongoing	Make sure that fuel reduction is occurring around county and city public infrastructure, county roads, including power lines, railroads, and communication sites.
Map abandoned cisterns and other water sources throughout the County and develop usable water systems for fire suppression purposes	Goal 3	Montana Rural Water, Toole County, City of Shelby, City of Sunburst Officials and Fire Chiefs	3.1.1 and 3.1.3	2027 - Ongoing	Continue work on a GIS layer of any water sources in the county. Inventory and map existing water sources and identify opportunities to improve or develop them for fire suppression.
Work with the Burlington Northern Santa Fe Railroad to identify critical crossings for emergency access.	Goal 3	Toole County and Toole County Fire Departments	3.3.1 and 3.4.1	2027 - Ongoing	Coordinate with BNSF to identify critical railroad crossings and maintain reliable access for emergency response.

Project Name	CWPP Goal Goal 1: Restore and Maintain Landscapes Goal 2: Fire-adapted Communities Goal 3: Wildfire Response	Responsible Entity	CWPP Strategy	Estimated Date of Completion	Notes
Develop an additional access route for the North Bootlegger area and improve existing roadways	Goal 3	Bureau of Reclamation and Toole County Fire Depts	3.4.1	2027 - Ongoing	Develop an additional access route for the North Bootlegger area and improve maintenance of the existing roadway and the undeveloped road heading westward past the established campground.
Replace inadequate fire suppression infrastructure	Goal 3	Tiber Water and Toole County Fire Depts	3.1.3	2027 - Ongoing	Replace the inadequate hydrant on S-366 with a larger hydrant.
Improve access on the North/South BNSF Railroad line	Goal 3	Toole County, Toole County Fire Depts, and BNSF Railroad	3.4.1	2027 - Ongoing	Improve access along the BNSF rail corridor to support wildfire and emergency response.
Enhance radio availability in each district and improve range within the region	Goal 3	Toole County Fire Depts and Toole County DES	3.2.1	2027 - Ongoing	Improve radio coverage and reliability, particularly in areas affected by the Sweet Grass Hills communication shadow.
Analyze and update PPE, hand tools, portable radios, and other equipment for city and rural fire departments	Goal 3	Toole County Fire Departments	3.5.1	2027 - Ongoing	Analysis of wildland fire response, equipment, and training needs. Update equipment as called for by inventory assessment.

Project Name	CWPP Goal Goal 1: Restore and Maintain Landscapes Goal 2: Fire-adapted Communities Goal 3: Wildfire Response	Responsible Entity	CWPP Strategy	Estimated Date of Completion	Notes
Install large-capacity cisterns on existing water systems to increase rural fire suppression water availability.	Goal 3	Toole County Fire Departments	3.1.3	2027 - Ongoing	Establish 2-3 large (20,000-gallon) cisterns on existing water systems for each of the rural areas of South Toole and North Toole County Fire Department service areas.
Purchase and outfit a brush truck for the North Toole County Fire Department	Goal 3	North Toole County Fire Department	3.5.1	2027 - Ongoing	Purchase and equip a brush truck to improve North Toole County's wildland fire response capacity.
Fund mobile repeater stations with a backup power source	Goal 3	Toole County Fire Departments	3.2.1	2027 - Ongoing	Install mobile radio repeaters with backup power to improve emergency communication coverage and reliability.
Review and Update County Communications Plan	Goal 3	Toole County Fire, Law Enforcement, EMS, and DES	3.4.1 and 3.5.1	2027 - Ongoing	Review current communications plans and update them. Ensure adequate coordination among plans such that all county personnel can communicate effectively during an emergency.
Review of Cooperative Agreements	Goal 3	Toole County and other Agencies	3.3.1	2027 - Ongoing	Review and update or renew, as needed, cooperative agreements with agencies and neighboring counties.

Project Name	CWPP Goal Goal 1: Restore and Maintain Landscapes Goal 2: Fire-adapted Communities Goal 3: Wildfire Response	Responsible Entity	CWPP Strategy	Estimated Date of Completion	Notes
Volunteer recruitment and retention	Goal 3	Toole County Fire Chiefs, County and City Officials, and DNRC	3.5.1	2027 - Ongoing	As volunteers get older, there needs to be active efforts to recruit and retain new volunteers. Discuss the possibility of incentives of some sort for volunteers.
Develop a plan to communicate emergency messages/evacuation notices to County residents	Goal 3	Toole County Sheriff's Office, Shelby Police Department, Toole County Dispatch, County and City Officials, and DES	3.2.1	2027 - Ongoing	Make sure key personnel have the proper training on using the Emergency Public Notification System. Provide educational outreach to the public on the Emergency Public Notification System.
Use and enforce the Toole County Burning Permit system	Goal 1	Toole County Officials, Fire Chiefs, Fire Warden, and County Dispatch	1.1.1	2027 - Ongoing	Make sure that the burn permit process is up to date and used. Educate the public on this process.
Targeted Fuel Reduction Projects	Goal 1	County (and other agencies)	1.1.1	2027 - Ongoing	Fuel reduction projects, with farmers on fence line weeds, and other areas with high or undesirable fuels.
VFD Equipment and Training Needs Evaluation	Goal 3	Fire Chiefs, Fire Warden, County and City Officials, and DNRC	3.5.1	2027 - Ongoing	Analysis of wildland fire response, equipment, and training needs.
VFD Training and Education	Goal 3	Fire Chiefs, Fire Warden and DNRC	3.5.1	2027 - Ongoing	Use County and cooperator expertise to meet training needs. Provide classes for farmers and ranchers.

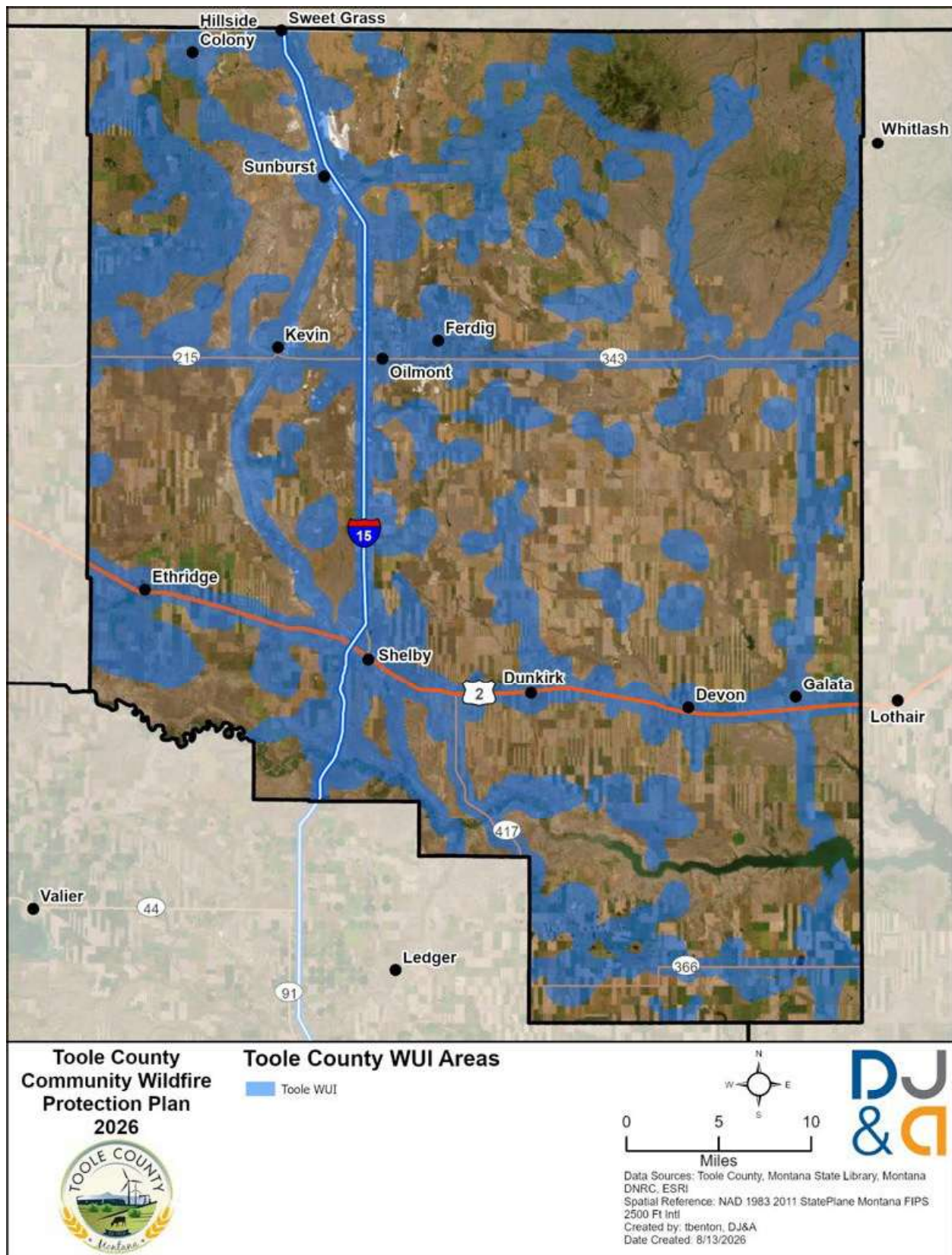
Project Name	CWPP Goal Goal 1: Restore and Maintain Landscapes Goal 2: Fire-adapted Communities Goal 3: Wildfire Response	Responsible Entity	CWPP Strategy	Estimated Date of Completion	Notes
CWPP Progress Report	Goal 2	DNRC leading with County (and other agencies)	2.1.5	Annually on CWPP sign date	Annual monitoring and updating of CWPP action table; reporting accomplishments and successes.

Table 7 Project Monitoring Form

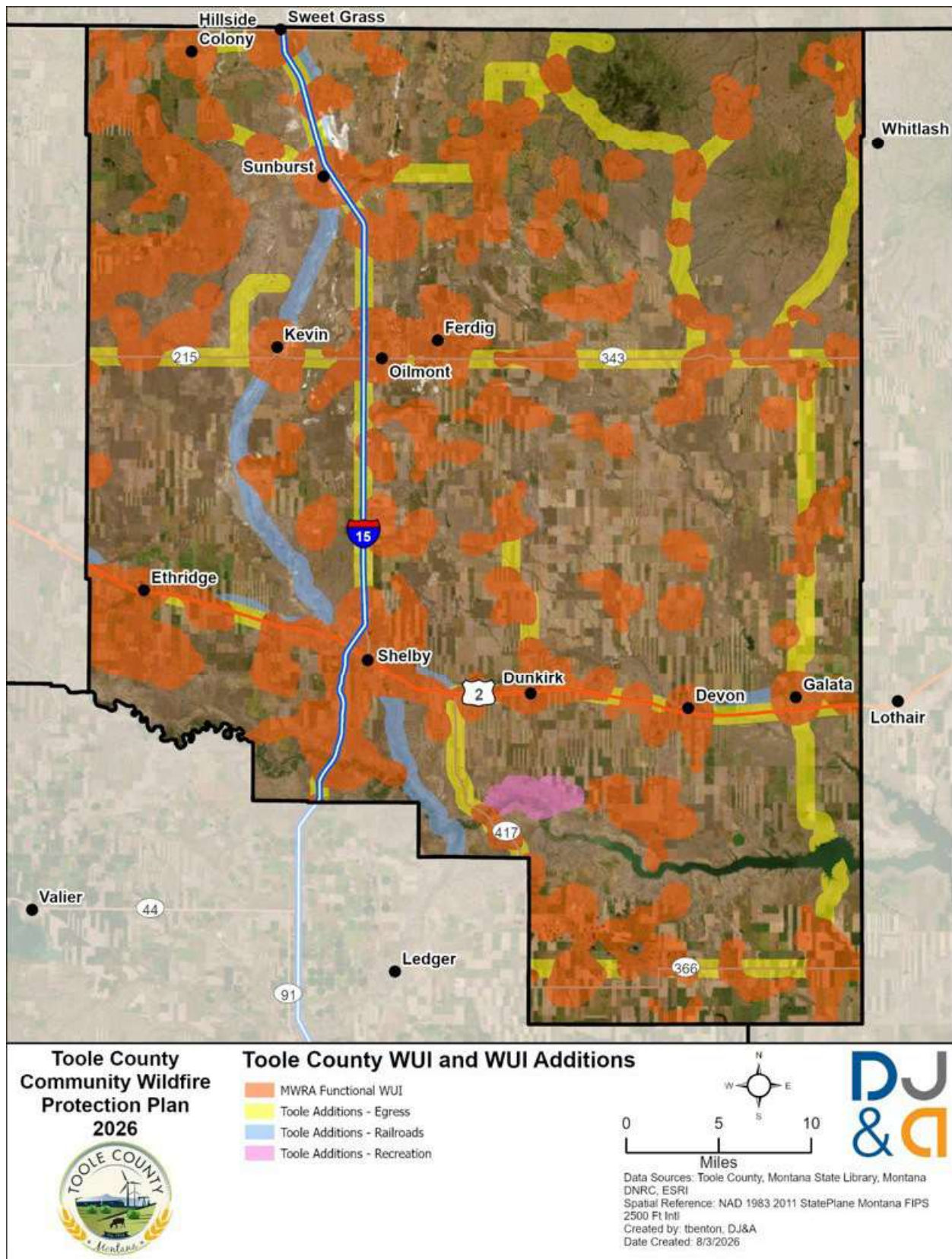
Project Monitoring Form	
Project Name:	
Project Reviewer/Date:	
Instructions: Refer to the projects in the Toole County Community Wildfire Protection Plan Update Action Plan to complete this form. This form should be completed for each project or phase of each project if phases are easily distinguishable.	
Project Description / Identify Need: Was the work needed to be done clearly described?	
Plan: Was the work planned?	
Implementation: Was the project implemented according to the plan?	
Verification: Did project actions meet the goals, objectives, and expected outcomes?	
Adaptive Management: What changes to the project implementation plan, if any, need to be made to facilitate the execution of the next similar project?	

Appendix C: Maps

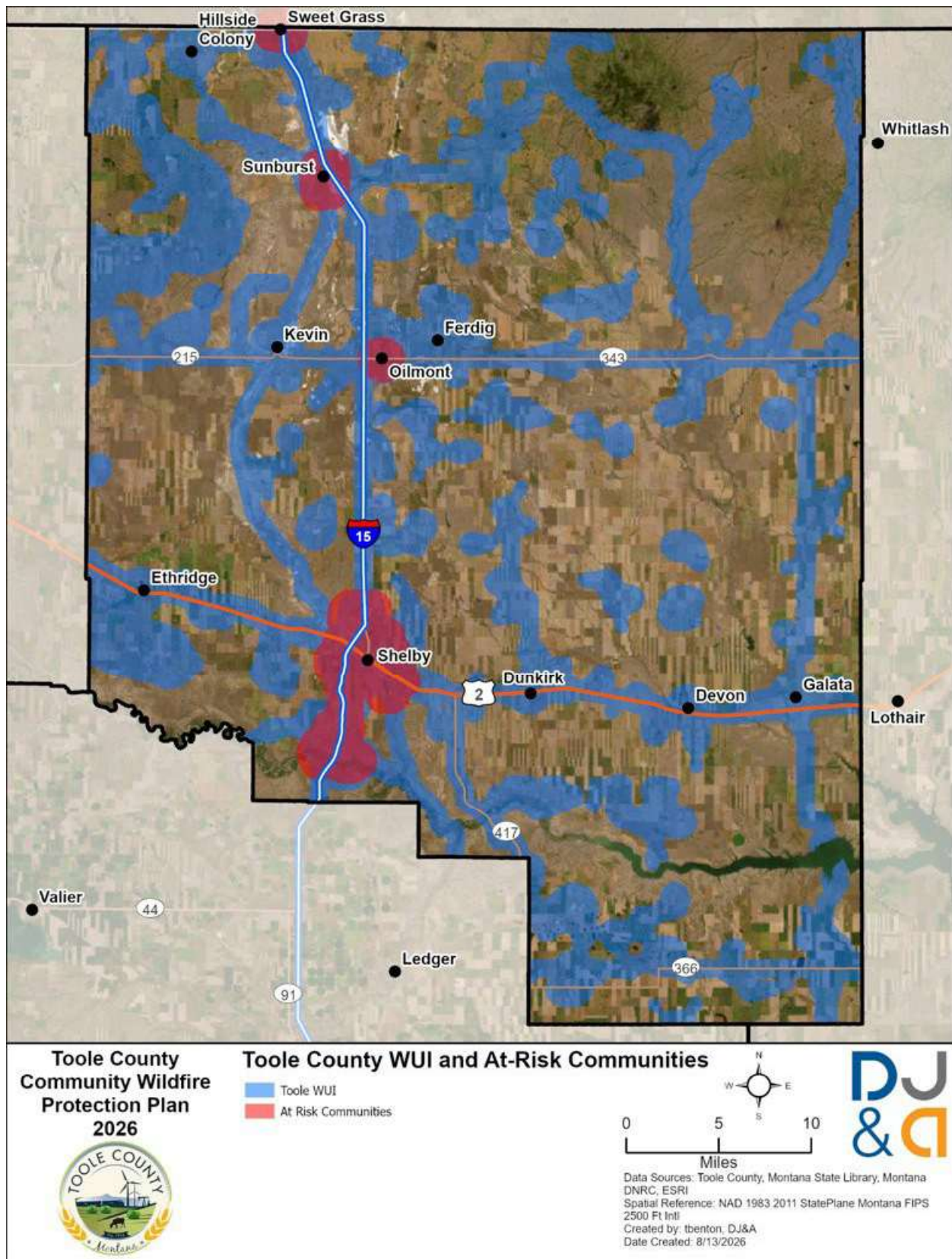
Map 1 Toole County WUI Areas (Functional WUI and Toole County Additions Combined).....	C-2
Map 2 MT DNRC Functional WUI and Toole County Additions	C-3
Map 3 Toole County WUI Areas and At-Risk Communities	C-4
Map 4 Risk to People, Property, and Infrastructure (eNVC) in Toole County	C-5
Map 5 Risk to Potential Structures (cNVC) in Toole County.....	C-6
Map 6 Toole County Fire Department Response Times.....	C-7
Map 7 Toole County Infrastructure and WUI	C-8
Map 8 Priority Areas and WUI in Toole County	C-9
Map 9 Toole County Firefighter Estimated Ground Evacuation Time	C-10
Map 10 Toole County Potential Control Location Suitability	C-11
Map 11 Toole County Wildfire Suppression Difficulty Index (97th Percentile)	C-12
Map 12 Land Ownership and WUI in Toole County	C-13
Map 13 WUI and Fire Response Areas in Toole County	C-14



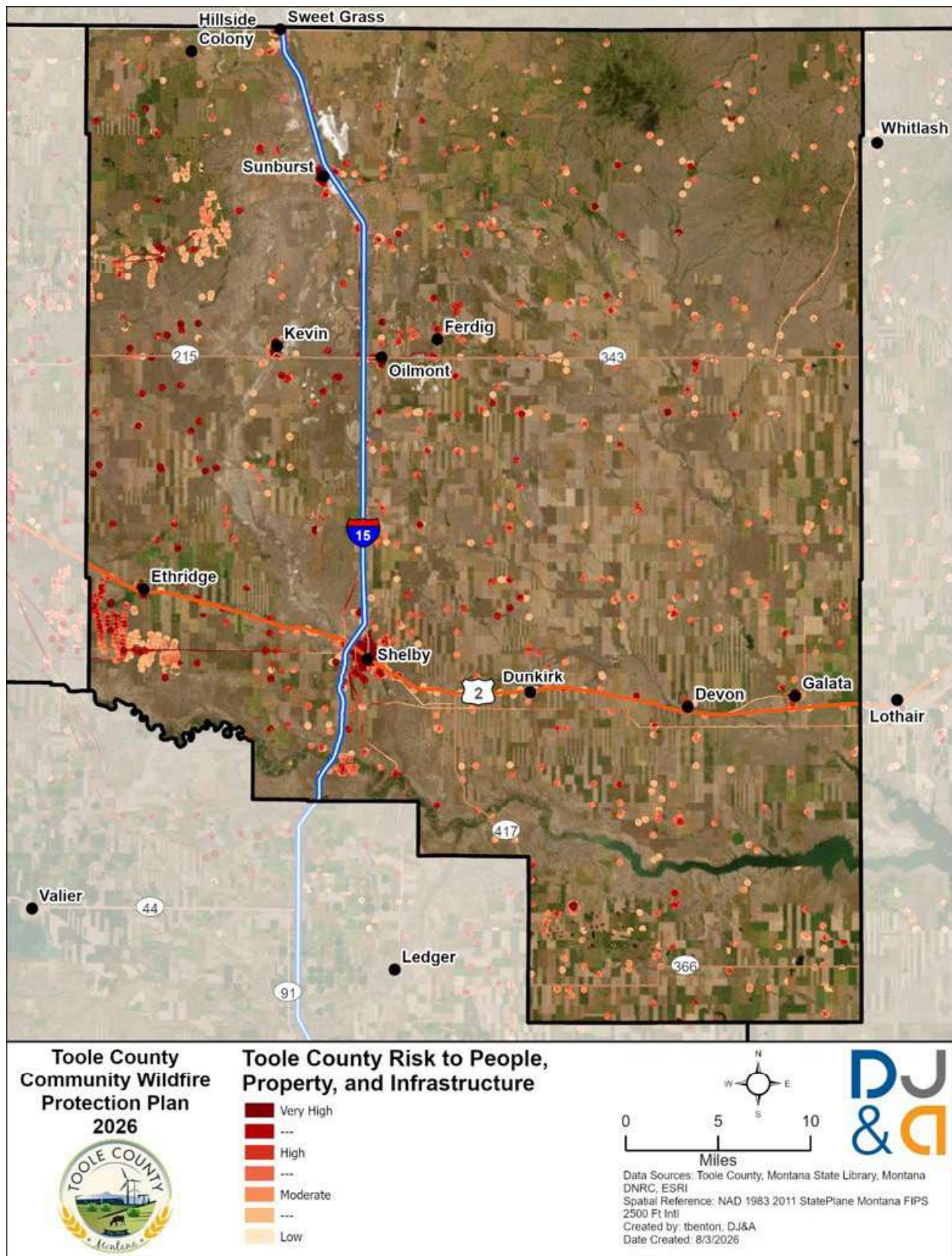
Map 1 Toole County WUI Areas (Functional WUI and Toole County Additions Combined)



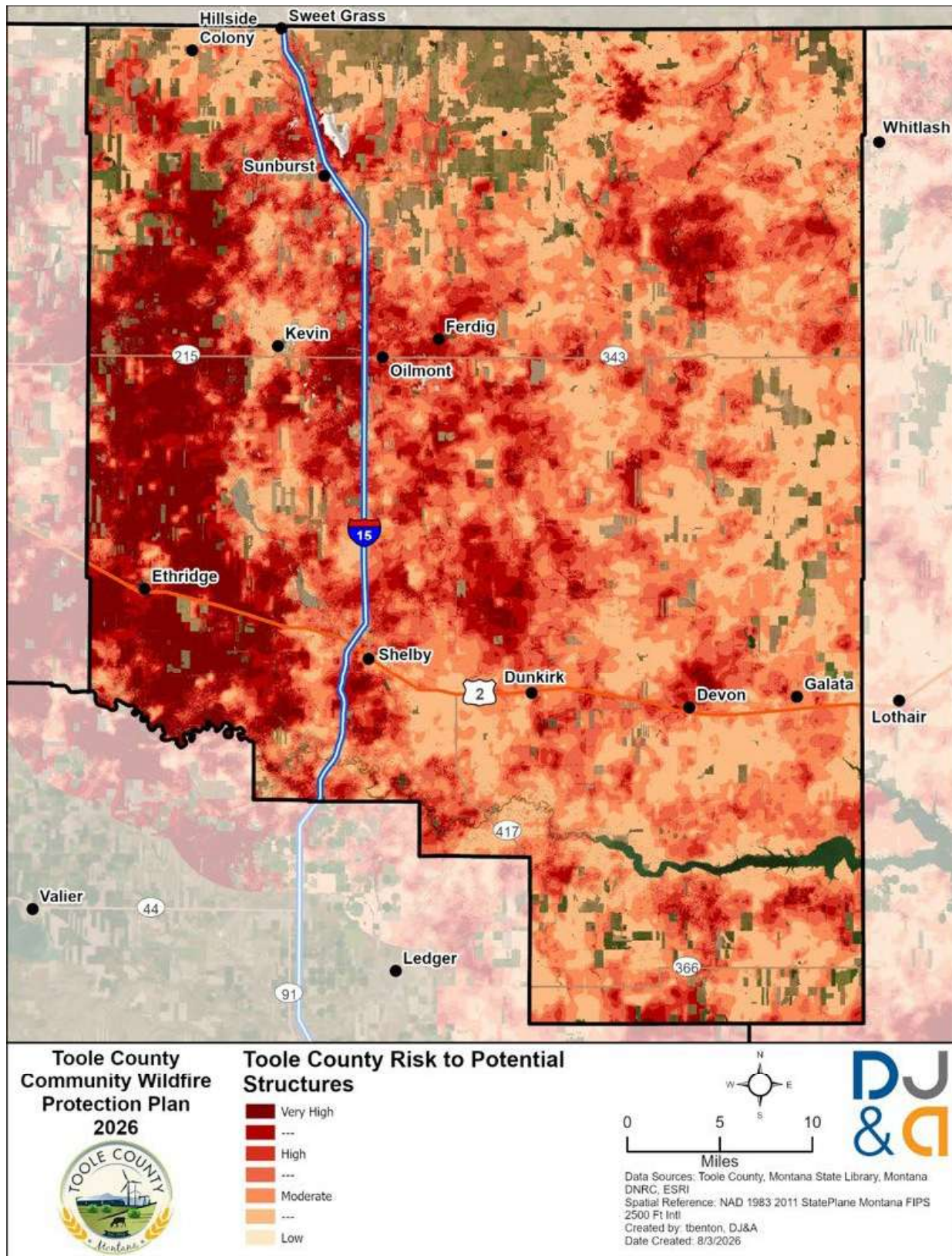
Map 2 MT DNRC Functional WUI and Toole County Additions



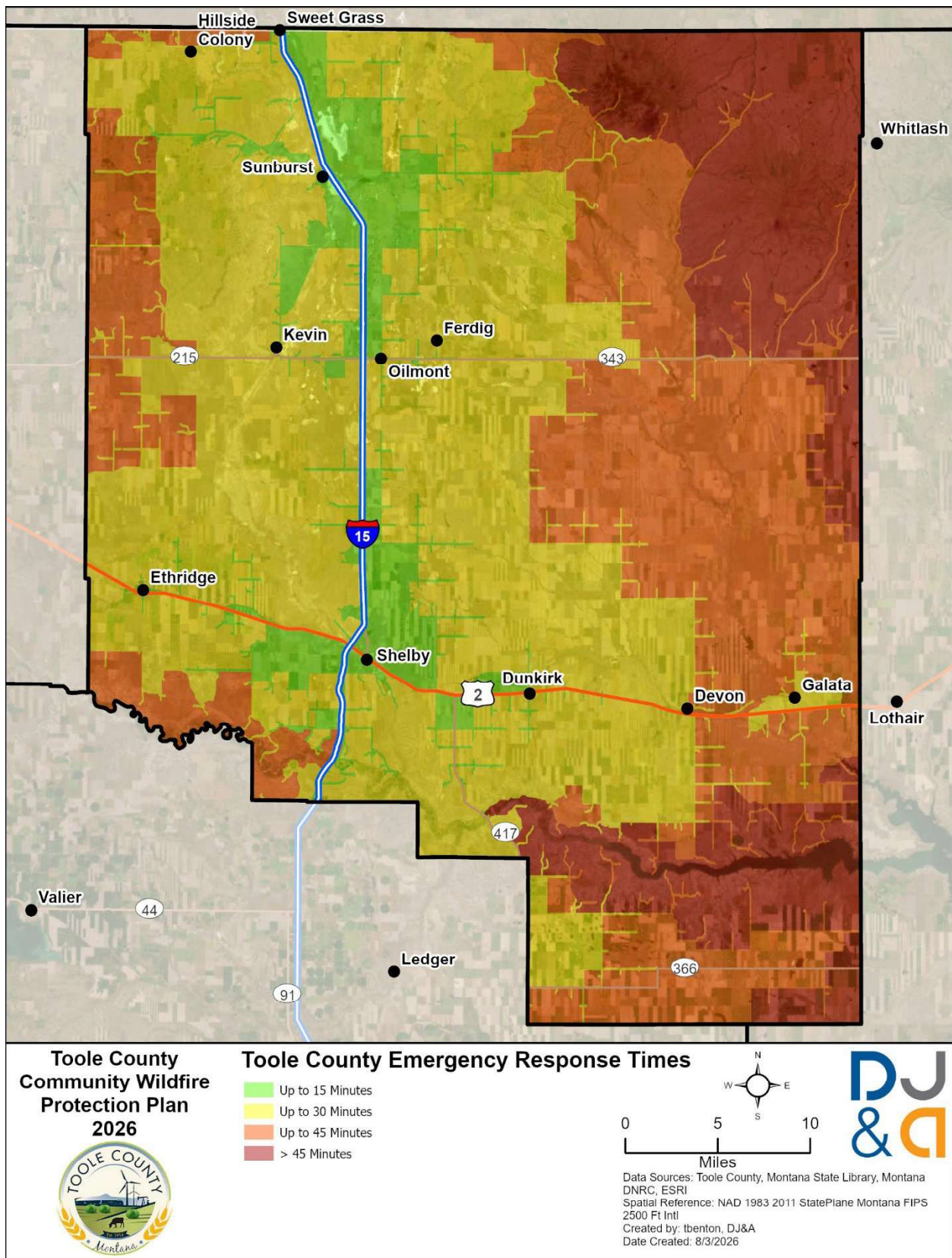
Map 3 Toole County WUI Areas and At-Risk Communities



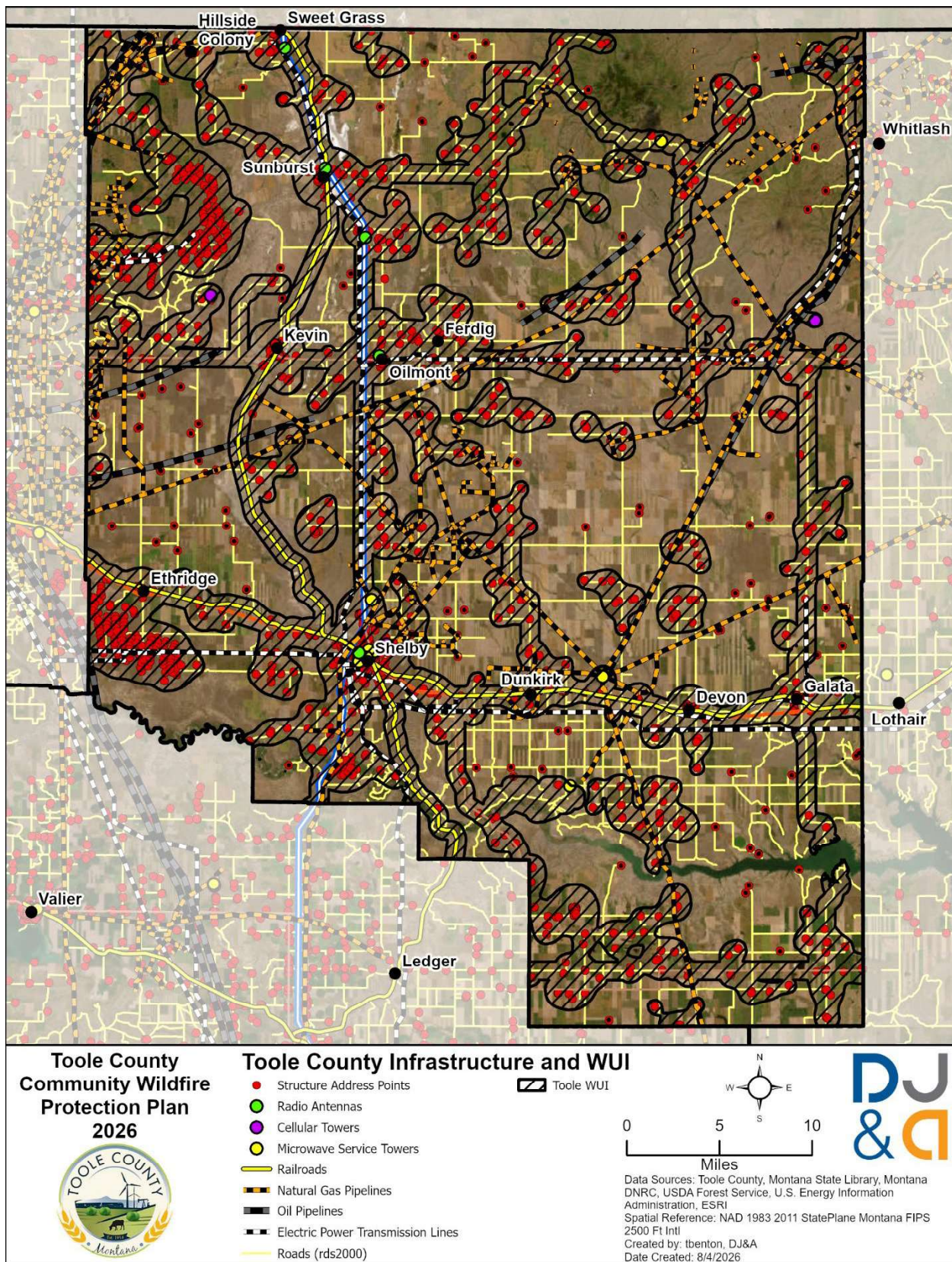
Map 4 Risk to People, Property, and Infrastructure (eNVC) in Toole County



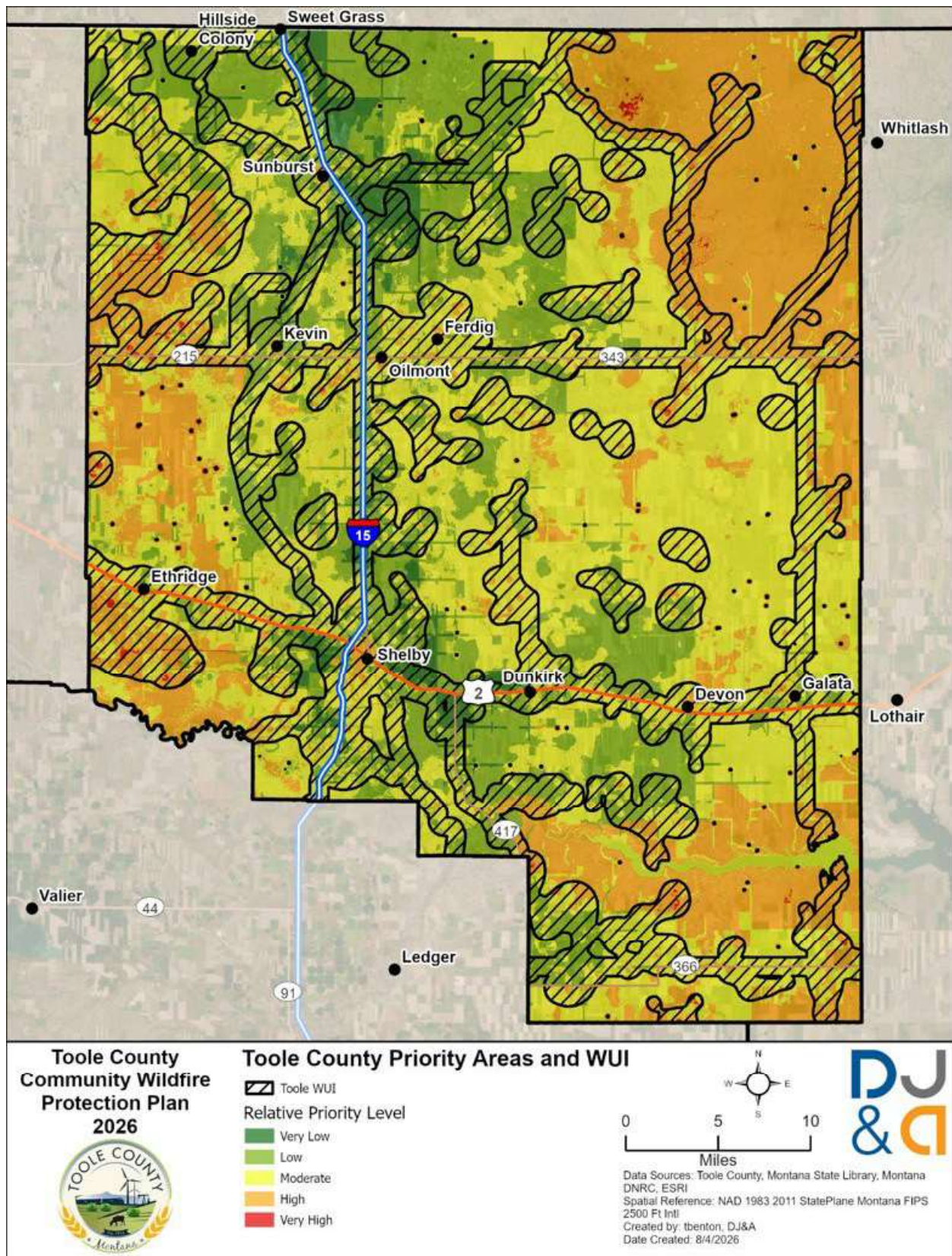
Map 5 Risk to Potential Structures (cNVC) in Toole County



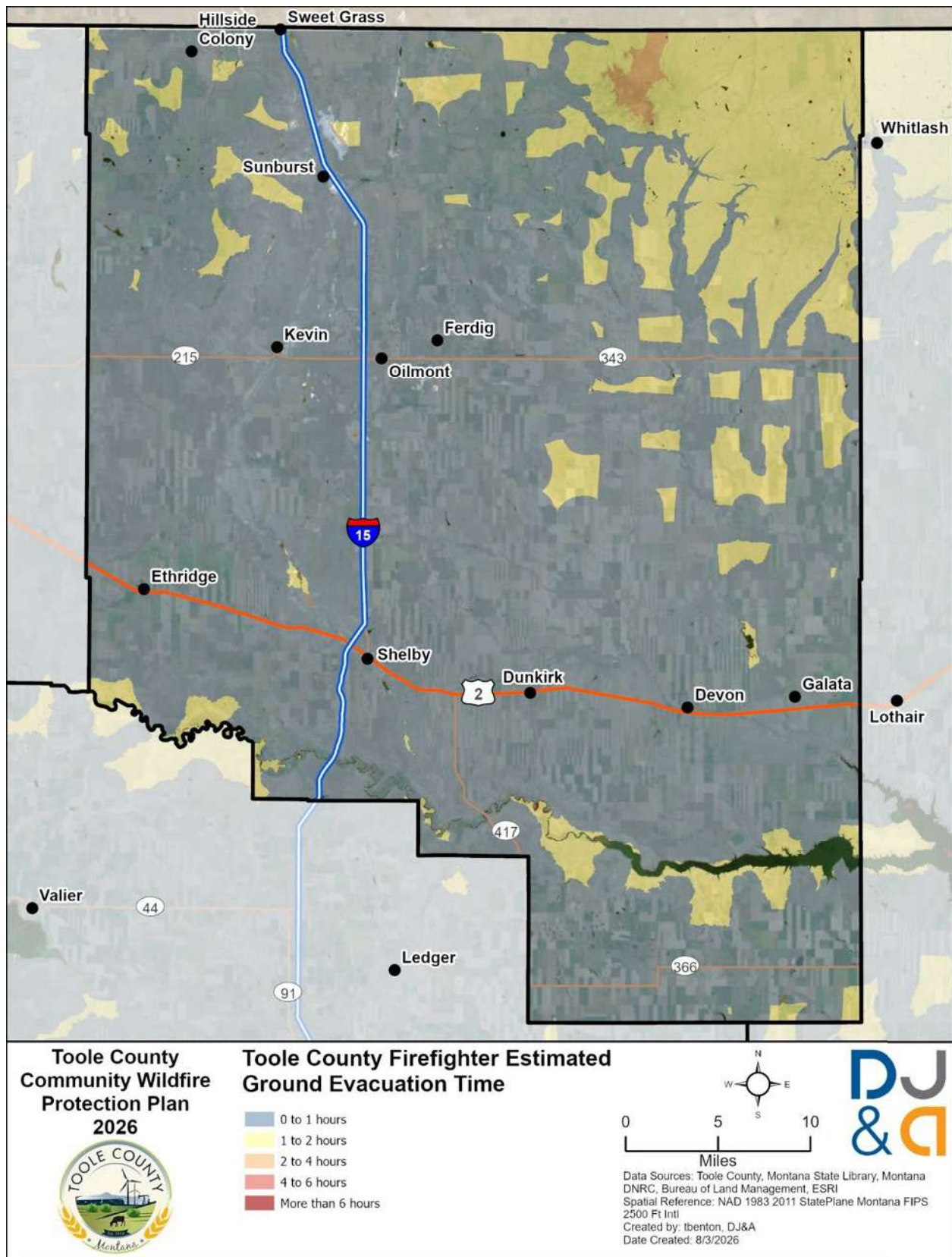
Map 6 Toole County Fire Department Response Times



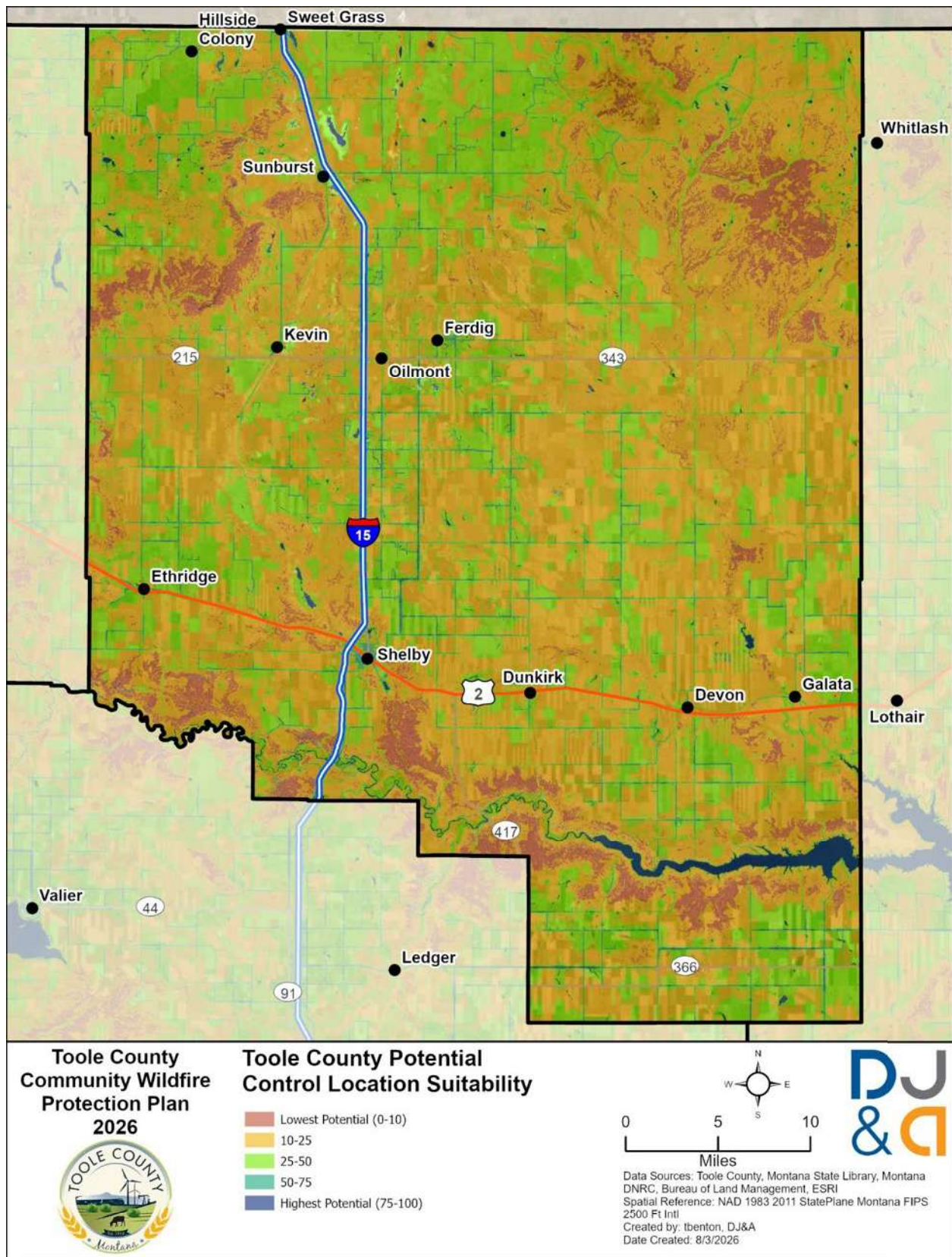
Map 7 Toole County Infrastructure and WUI



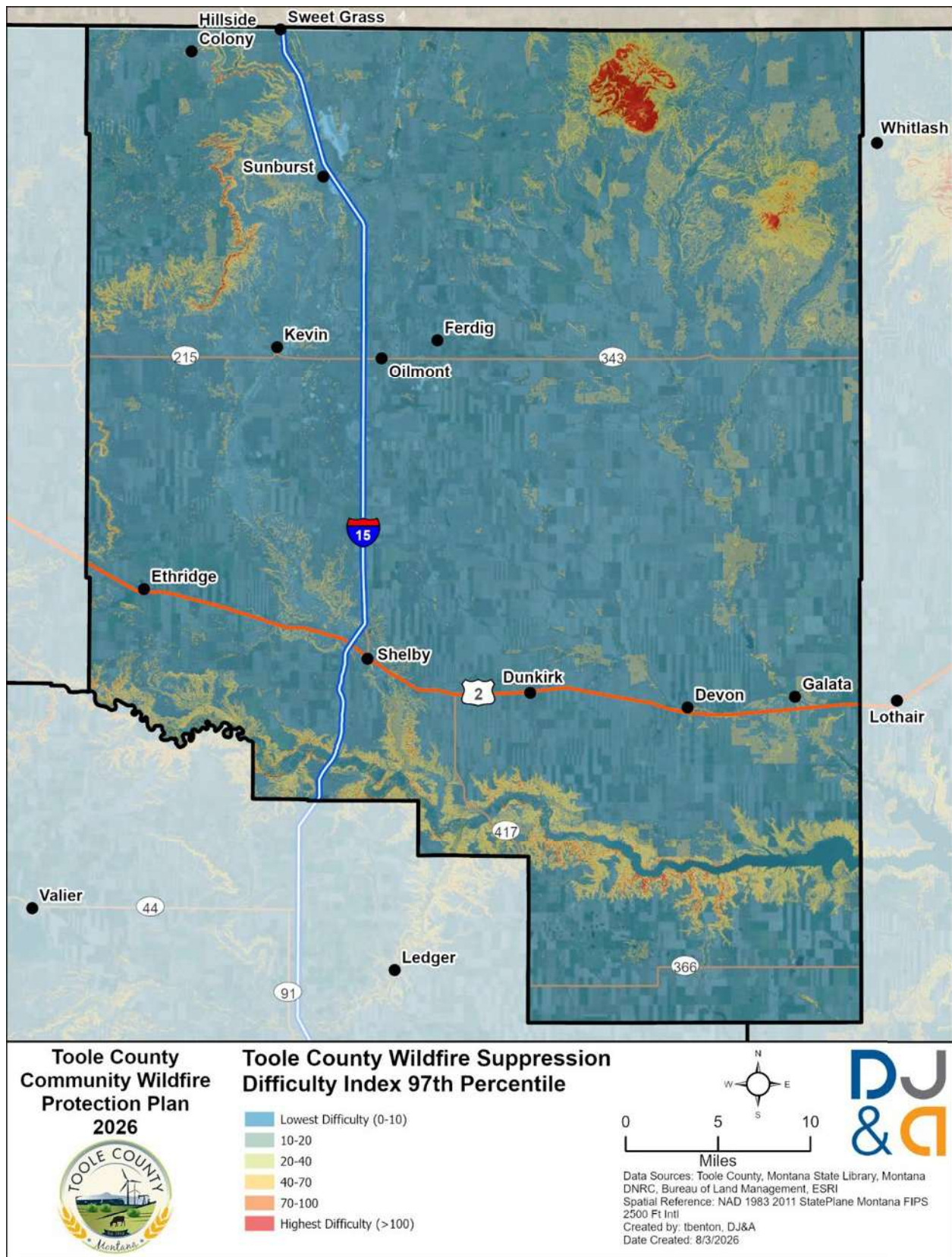
Map 8 Priority Areas and WUI in Toole County



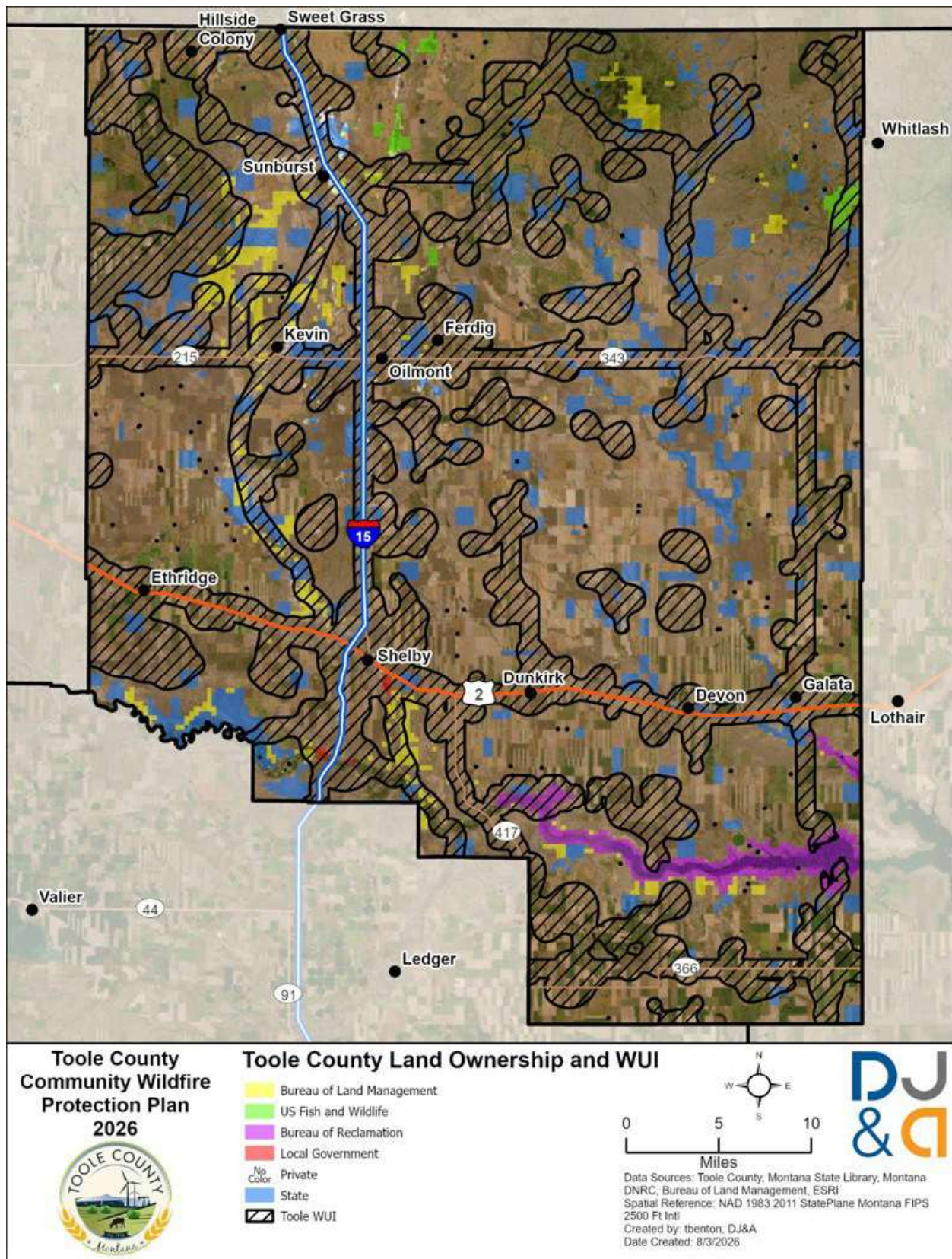
Map 9 Toole County Firefighter Estimated Ground Evacuation Time



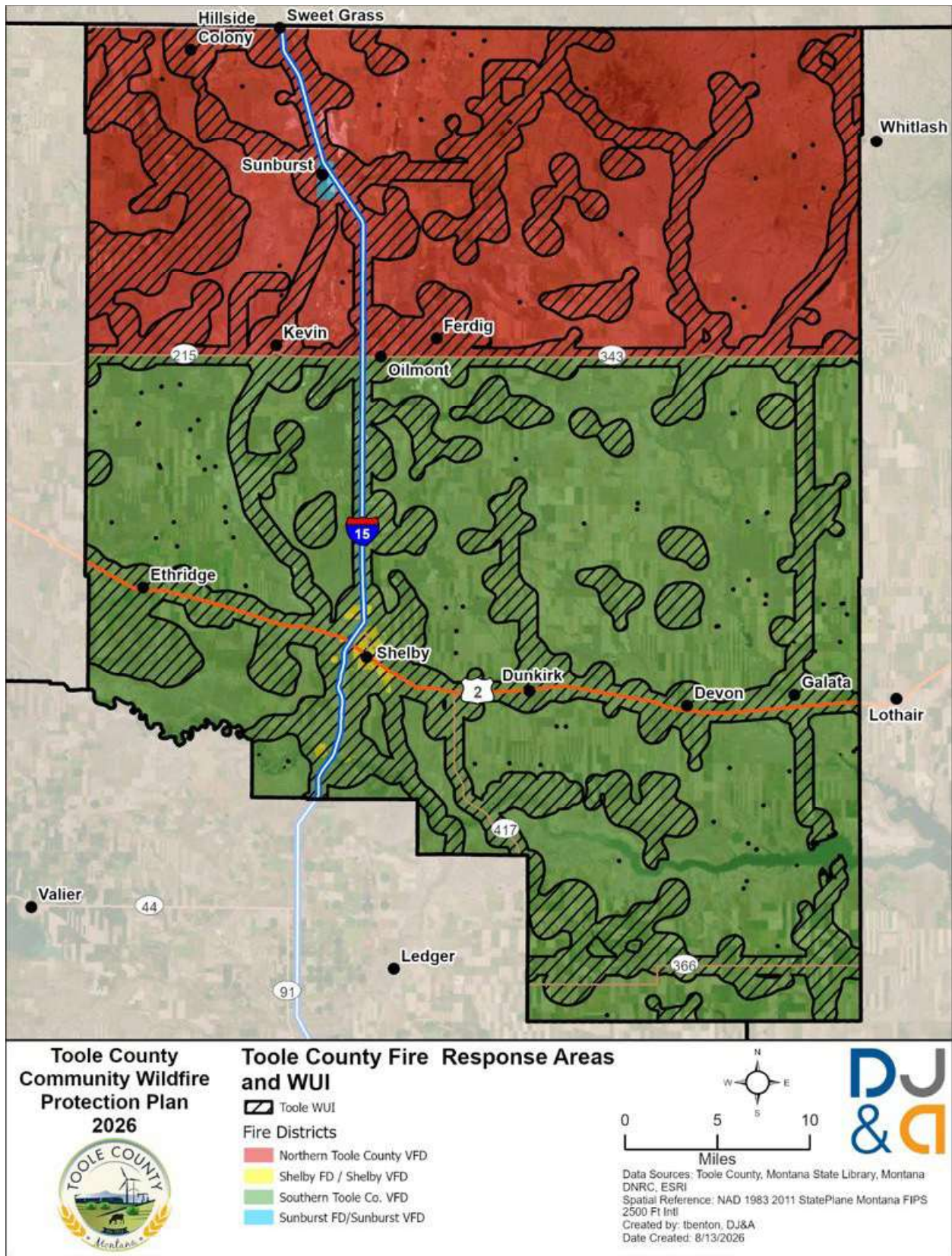
Map 10 Toole County Potential Control Location Suitability



Map 11 Toole County Wildfire Suppression Difficulty Index (97th Percentile)



Map 12 Land Ownership and WUI in Toole County



Map 13 WUI and Fire Response Areas in Toole County

Appendix D: Fire Department Resources

Table 8 North Toole County / Sunburst Fire Department Resources

North Toole County Fire Department / Sunburst Fire Department										
County Fire Warden: Norm Nelson					Address: 104 1 st Street N, Sunburst, MT 59482					
Fire Chief: Ben McAlpine					Telephone: (406) 937-2141					
Volunteer Firefighters: 19					Email: sunburstfire67@gmail.com					
Location of Equipment	Type of Resource	Type (Engine)	Radio Y / N	Resource Number	Year	Make	Model	Capacity	Special Equipment	Comments
Sunburst	Brush	6	Y	F-62	2006	Ford	F-350	350 gal	ProPak (foam)	
Sunburst	Brush	5	Y	F-64	2025	Ford	F-550	500 gal	ProPak	
Sunburst	Pumper	Pumper	Y	F-63	2009	Freightliner	Single Axle	1,250 gal	Genset	
Sunburst	Tender	Tender	Y	F-65	2006	Sterling	Tandem	3,500 gal	3,500 gal porta tank	
Sunburst	Extrication Unit	Rescue	Y	Rescue Red	1994	Chevy	K-3500	—	Genset	
Sunburst	Signage truck	Rescue	Y	Rescue White	1997	Ford	F-250	—	Genset	
Sweetgrass	Brush	5	Y	DNRC 2	2009	Ford	F-550	500 gal	Foam injection	
Sunburst	Brush	3	Y	Flame	1991	Ford	F-800	750 gal	ProPak (foam)	
Oilmont	Brush	5	Y	DNRC 1	2013	Ford	F-550	500 gal	Foam injection	
Oilmont	Brush	3	Y	F-66	2004	International	4400	1,250 gal	ProPak (foam)	

Table 9 South Toole County / Shelby Fire Department Resources

South Toole County Fire Department / Shelby Fire Department										
County Fire Warden: Norm Nelson					Address: 125 7 th Ave N, Shelby, MT 59474					
Fire Chief: Ron Buck					Telephone: (406) 434-2303					
Volunteer Firefighters: 25					Email: shelifire@3rivers.net					
Location of Equipment	Type of Resource	Type (Engine)	Radio Y / N	Resource Number	Year	Make	Model	Capacity	Special Equipment	Comments
Shelby	Type 1 Pumper	Type 1	Y	F53	2023	Freightliner/ Central States	Advantage FF	1500 gal	4WD	Pump and Roll capable
Shelby	Type 1 Pumper	Type 1	Y	F51	2006	Smeal	—	1500 gal	—	
Shelby	Engine	Type 1	Y	F52	2006	E-One	Aerial Platform	2000 gal	95 Platform	
Shelby	Engine	Type 6	Y	F56	2013	Ford	F450	50 gpm	Foam	
Shelby	Engine	Type 6	Y	F54	2017	Dodge	Ram 3500	50 gpm	Foam	
Shelby	Engine	Type 6	Y	R20	2010	Ford	F450	50 gpm	Foam	
Dunkirk	Engine	Type 6	Y	R21	2010	Ford	F450	50 gpm		DNRC
Shelby	Tender	—	Y	FW1	2005	Peterbilt	PB335	3500 gal	Poly tank	Pump and Roll
Shelby	Tender	—	Y	FW2	2003	Freightliner	FL70	2300 gal	—	Pump and Roll
Shelby	Tender	—	Y	FW3	1995/ 1985	Freightliner / Tanker	—	6000 gal	—	Tractor / Trailer

Table 10 MT DNRC Fire Suppression Resources Available to Toole County

Montana Department of Natural Resources and Conservation											
Conrad Unit Office Manager: Erik Eneboe Address: P.O. Box 961, Conrad, MT 59425 Telephone: (406) 278-7869 Email: eeneboe@mt.gov				Central Land Office Rural Fire Specialist: Joseph Murphy Address: 8001 N. MT Ave Helena, MT 59602 Telephone: (406) 458-3504 Email: joseph.murphy@mt.gov				Central Land Office Fire Program Manager: John Huston Address: 8001 N. MT Ave Helena, MT 59602 Telephone: (406) 458-3524 Email: jhuston@mt.gov			
Location of Equipment	Type of Resource	Type (Engine)	Radio Y / N	Resource Number	Year	Make	Model	Capacity	Special Equipment	Comments	
Helena	Engine	T5	Y	—	—	Ford	F-550	500 gal	—		
Helena	Engine	T5	Y	—	—	Ford	F-550	500 gal	—		
Helena	Engine	T5	Y	—	—	Ford	F-550	500 gal	—		
Helena	Engine	T5	Y	—	—	Ford	F-550	500 gal	—		
Helena	Engine	T5	Y	—	—	Ford	F-550	500 gal	—		
Helena	Engine	T5	Y	—	—	Ford	F-550	500 gal	—		
Dillon	Engine	T5	Y	—	—	Ford	F-550	500 gal	—		
Dillon	Engine	T5	Y	—	—	Ford	F-550	500 gal	—		
Dillon	Engine	T5	Y	—	—	Ford	F-550	500 gal	—		
Helena	Helicopter	T2	Y	—	—	—	—	300 gal bucket	6 people		
Helena	Helicopter	T2	Y	—	—	—	—	300 gal bucket	6 people		
Helena	Fixed Wing	—	Y	—	—	Cessna	206	—	Sensor Detection		
Helena	Fixed Wing	—	Y	—	—	Kodiak	900	—	Air Attack		

Table 11 BLM Fire Suppression Resources Available to Toole County

Bureau of Land Management – North Central Montana District Office										
Fire Mitigation and Education Specialist: Shannon Bonney Address: 920 NE Main St Lewistown, MT 59457 Telephone: (406) 538-1942 Email: sbonney@blm.gov					Wildland Fire Service: Clint Mrnak Address: 920 NE Main St Lewistown, MT 59457 Telephone: (406) 538-1900 Email: cmrnak@blm.gov					
Location of Equipment	Type of Resource	Type (Engine)	Radio Y / N	Resource Number	Year	Make	Model	Capacity	Special Equipment	Comments
Lewistown	Engine	Type 6	Y	Things 1 & 2	—	Kabota	—	—	—	
Lewistown	Engine	Type 6	Y	—	—	—	—	—	—	
Lewistown	Engine	Type 4	Y	6605	—	Ford	F550	300 gal	—	
Zortman	Engine	Type 6	Y	6601	—	Ford	F550	300 gal	—	
Zortman	Engine	Type 6	Y	6601	—	Ford			—	
Lewistown	WFM	Module 10 man	Y	6603	2017	Ford	F550	300 gal	—	
Lewistown	Kabota x 2	—	N	6606	2011	Ford	F550	300 gal	—	

Appendix E: Cooperative Agreements

Table 12 Summaries of Cooperative Agreements Currently on File in Toole County

Agreement	Participants	Date	Summary
Village of Coutts (Alberta) – Toole County Fire Protection Agreement (1997)	Village of Coutts, Alberta and Toole County	July 28, 1997	This Memorandum of Agreement (MOA) establishes that the Village of Coutts' volunteer fire department provides emergency fire suppression and related services to Toole County for the Town of Sweetgrass, MT and the surrounding "Protected Lands" (10 miles east/west of Sweetgrass, 4 miles south of the international boundary). In exchange, the County pays Coutts an Annual Retainer Fee of \$1,000, reviewed annually and adjustable if actual costs exceed the prior year's fee by 20%. The Village of Coutts commits to "best efforts" priority response but is not contractually obligated to respond and carries no liability for delayed or failed response. The County also agrees to name Coutts as an additional insured on its liability policy. This MOA ran for an initial 1-year term, then automatically renews year to year, terminable by either party with 90 days' written notice.
Toole County and County of Warner, Alberta Mutual Aid (2021)	County of Warner No. 5, Alberta (with informal references to Village of Coutts and North Toole County Fire)	October 28, 2021	A short confirmation letter from Toole County Commissioners stating that the county maintains a mutual aid agreement with the County of Warner, Alberta for fire protection of Sweetgrass, MT and surrounding areas. The letter states that the Village of Coutts has first call on any Sweetgrass fire and North Toole County Fire providing backup mutual aid.
Sunburst Volunteer Fire Department – Malmstrom AFB Mutual Aid Agreement (2021)	Secretary of the Air Force and the Sunburst Volunteer Fire Department	November 2021	This Mutual Aid Agreement established reciprocal mutual aid in fire protection and hazardous materials incident response between Malmstrom Air Force Base (AFB) and Sunburst Volunteer Fire Department (VFD), specifically covering intercontinental ballistic missiles (ICBM) alert/launch facilities, ICBM transport incidents, and on or off-base support. These nuclear missiles are stored and maintained at underground launch facilities at the AFB. This agreement is authorized under the authority of 42 U.S.C. § 1856a, which allows military bases to enter into firefighting agreements with local communities, and Air Force Instruction 32-2001, an Air Force internal policy that governs how the Air Force runs its fire and emergency services. On request, each party dispatches fire protection equipment and personnel to points within the other's normal service area.
Shelby Volunteer Fire Department – Malmstrom Air Force Base Mutual Aid Agreement (2023)	Secretary of the Air Force and the Shelby Volunteer Fire Department	August 21, 2023	Similar to the Sunburst Agreement, this agreement established reciprocal mutual aid in fire protection and hazardous materials incident response between Malmstrom AFB and the Shelby VFD, covering ICBM alert/launch facilities, ICBM transport incidents, and on- or off-base support, authorized under 42 U.S.C. § 1856a and Air Force Instruction 32-2001. It also establishes shared non-encrypted radios for joint responses, defines hazardous materials response responsibilities, gives the Malmstrom Fire Chief command authority at aircraft crash sites within Shelby VFD's coverage area, requires an Air Force safety officer on scene, allows Shelby VFD to seek federal reimbursement for extra firefighting costs under the Federal Fire Prevention and Control Act (15 U.S.C. § 2210), requires Shelby VFD to accept liability

Agreement	Participants	Date	Summary
			for harm caused by Air Force firefighting foams or chemicals used in its aid (surviving termination of the agreement), and adopts NIMS and NFPA 1561. This agreement runs for a 5-year term with mandatory annual reviews, terminable by either party with 180 days' written notice.
DNRC Firefighter Property (FFP) Cooperative Agreement (2020–2025)	Montana DNRC	January 28, 2020 – 2025	As of 2020, Toole County holds a Firefighter Property (FFP) Cooperative Agreement, authorized under 10 U.S.C. § 2576b, through the MT DNRC. This enables the DNRC to facilitate the transfer of surplus firefighting equipment from the U.S. Department of Defense, such as trucks and other firefighting tools, to the county. Toole County is responsible for maintaining, insuring, and properly using the equipment, and for accepting liability for any damage or loss. The county is required to keep and actively use the equipment for a minimum of five years and may only dispose of it through a state-approved process if it becomes obsolete or uneconomical to repair. The agreement was established for a five-year term (2020–2025) and does not renew automatically; it can only be extended if both the county and DNRC agree in writing.
MT DNRC Cooperative Fire Control Agreement (2024) + MT DNRC Cooperative Equipment Agreement (2024)	Toole County and Montana DNRC	Effective January 18, 2024, countersigned March 8, 2024	These two related agreements establish the county's wildfire protection framework. The Cooperative Fire Control Agreement requires the county to draft and annually update a written wildland fire management plan and appoint a County Rural Fire Chief/Fire Warden to coordinate with DNRC; DNRC reviews and helps fund the plan each year, with both parties meeting annually to update it by May 15. It renews automatically each July 1 unless either party gives written notice to terminate by June 1. The subsidiary Cooperative Equipment Agreement allows the county to borrow DNRC firefighting equipment (the State retains legal ownership); the county must maintain and inventory the equipment, accept liability for loss or damage, and cannot sell, scrap, trade, rent, or disassemble equipment without state approval. It remains in effect indefinitely but is tied to the Fire Control Agreement — if either agreement ends, all loaned equipment must be returned to the state in operable condition within 30 days of written notice.

Appendix F: Potential Funding Sources

Table 13 Potential Funding Opportunities for Homeowners and Toole County

Funding Opportunities	
Homeowner	
DNRC Hazardous Fuels Reduction Grant https://dnrc.mt.gov/Forestry/Grants/StewardshipGrants/Hazardous-Fuels-Reduction	The Hazardous Fuels Reduction Grant focuses on reducing the risk of wildland fire and catastrophic losses to resources and property in high-priority areas.
National Fire Protection Association Wildfire Community Preparedness Day Grant https://www.nfpa.org/en/events/wildfire-community-preparedness-day/Map-your-project	Wildfire Community Preparedness Day is a campaign that encourages people and organizations everywhere to come together on a single day to take action to raise awareness and reduce wildfire risks. It is held annually in the United States and Canada on the first Saturday in May.
Toole County	
DNRC Rural Fire Capacity Grant https://dnrc.mt.gov/Forestry/Grants/FireGrants/Volunteer-Fire-Capacity	The Volunteer Fire Capacity (VFC) Program, sponsored by the U.S. Department of Agriculture Forest Service, makes funding available to rural fire departments. This federal funding is passed through and administered by the Department of Natural Resources and Conservation (DNRC).
DNRC Cooperative Fire Protection Capacity Grant https://dnrc.mt.gov/Forestry/Grants/FireGrants/Cooperative-Fire-Protection-Capacity-Grant	DNRC's fundamental intent in areas of State/County Cooperative Fire Protection (County Coop) is to build and maintain the capacity of local governments so that local firefighters routinely succeed on the initial attack of wildland fires and avoid the need for large-scale involvement by the DNRC or our federal partners.
DNRC Community Wildfire Defense Grant (planning and implementation grants) https://dnrc.mt.gov/forestry/grants/StewardshipGrants/Community-Wildfire-Defence-Grant	The Community Wildfire Defense Grant aims to fund revision or development of Community Wildfire Protection Plans (CWPP) and the implementation of projects described in a CWPP.
DNRC Landscape Scale Restoration Grant https://dnrc.mt.gov/forestry/grants/StewardshipGrants/Landscape-Scale-Restoration	The program supports cross-boundary, landscape-scale projects (up to 3 years) on non-federal forest lands that address state-identified (Montana Forest Action Plan) forest management priorities and leverage public and private resources.

Funding Opportunities	
Montana Disaster Emergency Services Hazard Mitigation Grant https://des.mt.gov/Grant-Programs/HMGP	The Hazard Mitigation Grant Program provides funding to state, local, and tribal governments so they can rebuild in a way that reduces, or mitigates, future disaster losses in their communities. This grant funding is available after a presidentially declared disaster.
Western States WUI Grant https://dnrc.mt.gov/forestry/grants/StewardshipGrants/Western-States-Wildland-Urban-Interface	Protect communities within the Wildland Urban Interface (WUI) through outcome-driven, cross-boundary, innovative projects that align with priority areas identified in the Montana Wildfire Risk Assessment & Montana Forest Action Plan.
Federal Emergency Management Agency (FEMA) Fire Management Assistance Grant https://www.fema.gov/assistance/public/fire-management-assistance	Fire Management Assistance Grant (FMAG) Program is available to states and local and tribal governments for the mitigation, management, and control of fires on publicly or privately owned forests or grasslands, which threaten such destruction as would constitute a major disaster.
FEMA Pre-Disaster Mitigation Grant Program https://www.fema.gov/grants/mitigation/learn/pre-disaster	The Pre-Disaster Mitigation (PDM) Grant Program makes federal funds available to state, local, tribal and territorial governments to plan for and implement sustainable, cost-effective measures designed to reduce the risk to individuals and property from future natural hazards.
USDA Community Wildfire Defense Grant https://www.fs.usda.gov/managing-land/fire/grants/cwdg	Community Wildfire Defense Grants (CWDG) help communities and Tribes plan for and reduce wildfire risk and implement the National Cohesive Wildland Fire Management Strategy.
Fire House Subs Public Safety Foundation Grant https://firehousesubs-foundation.wizehive.app/program/firehouse-subs-foundation-grant-us/applicant/application/info	The Fire House Subs Public Safety Foundation Grant provides grants for lifesaving equipment and prevention education tools to first responders and public safety organizations.

Appendix G: Glossary of Terms

Table 14 Glossary of Terms used in the 2027 CWPP

Term	Definition	Source
Asset (Wildfire)	Human-made features, such as commercial structures, critical facilities, housing, etc., that have a specific importance or value.	(DNRC 2020)
At-risk community	The term “at-risk community” means an area— (A) that is comprised of— (i) an interface community as defined in the notice entitled “Wildland Urban Interface Communities Within the Vicinity of Federal Lands That Are at High Risk From Wildfire” issued by the Secretary of Agriculture and the Secretary of the Interior in accordance with title IV of the Department of the Interior and Related Agencies Appropriations Act, 2001 (114 Stat. 1009) (66 Fed. Reg. 753, January 4, 2001); or (ii) a group of homes and other structures with basic infrastructure and services (such as utilities and collectively maintained transportation routes) within or adjacent to Federal land; (B) in which conditions are conducive to a large-scale wildland fire disturbance event; and (C) for which a significant threat to human life or property exists as a result of a wildland fire disturbance event.	Healthy Forest Restoration Act of 2003 (P.L. 108-148)
Community Wildfire Protection Plan	(3) COMMUNITY WILDFIRE PROTECTION PLAN.—The term “community wildfire protection plan” means a plan for an at-risk community that— (A) is developed within the context of the collaborative agreements and the guidance established by the Wildland Fire Leadership Council and agreed to by the applicable local government, local fire department, and State agency responsible for forest management, in consultation with interested parties and the Federal land management agencies managing land in the vicinity of the at-risk community; (B) identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment on Federal and non-Federal land that will protect 1 or more at-risk communities and essential infrastructure; and (C) recommends measures to reduce structural ignitability throughout the at-risk community.	Healthy Forest Restoration Act of 2003 (P.L. 108-148)
Condition Class (Vegetation)	Depiction of the degree of departure from historical fire regimes, possibly resulting in alterations of key ecosystem components. These classes categorize and describe vegetation composition and structure conditions that currently exist inside the Fire Regime Groups. Based on the coarse-scale national data, they serve as generalized wildfire rankings. The risk of loss of key ecosystem components from wildfires increases from Condition Class 1 (lowest risk) to Condition Class 3 (highest risk).	(NWCG 2023a)
Exposure (Wildfire)	The placement or coincidental location of an asset or resource within a hazardous environment.	(DNRC 2020)
Fire Behavior	The manner in which a fire reacts to the influences of fuel, weather, and topography.	(NWCG 2023b)
Fire Intensity	A general term relating to the heat energy released in a fire.	(USDA 2023)

Term	Definition	Source
Fire Management	All activities related to the management of wildland fires, including fire prevention, fire suppression, and use of prescribed fire.	(NWCG 2023b)
Fire Regime	Fire regimes describe and categorize patterns of fire ignition, seasonality, frequency, type (crown, surface, or ground fire), severity, intensity, and spatial continuity (pattern and size) that occur in a particular area or ecosystem.	(USDA 2023)
Fire Return Interval	Number of years between two successive fires in a specified area. Often used to designate an average of intervals (i.e., mean fire interval).	(USDA 2023)
Fire Severity	Degree to which a site has been altered or disrupted by fire; loosely, a product of fire intensity and residence time.	(NWCG 2024)
Flame Length	The length of flames in a fire front measure along the slant of a flame, from the midpoint of its base to its tip. Flame length is mathematically related to fireline intensity and tree crown scorch height.	(USDA 2023)
Fuel	Any combustible material, especially petroleum-based products and wildland fuels.	(NWCG 2024)
Fuel Class	A set of fuels with similar traits. Fuels are categorized as herbaceous or woody and live or dead. Dead fuels are classed as 1-, 10-, 100-, or 1,000-hour timelag fuels, based on the time needed for fuel moisture to come into equilibrium with the environment: • 1-hour timelag fuels: Dead fuels comprised of herbaceous plants or woody plants less than about 0.25 inch (6.4 mm) in diameter and the surface layer of litter on the forest floor. • 10-hour timelag fuels: Dead fuels comprised of wood from 0.25 to 1 inch (0.6-2.5 cm) in diameter and the litter from just beneath the surface to around 0.75 inch (1.9 cm) below ground. • 100-hour timelag fuels: Dead fuels comprised of wood from 1 to 3 inches (2.5-7.6 cm) in diameter and litter from around 0.75 to about 4 inches (1.9-10 cm) below ground. • 1,000-hour timelag fuels: Dead fuels comprised of wood from 3 to 8 inches (7.6-20.3) in diameter and the forest floor layer >4 inches (10 cm) below ground.	(USDA 2023)
Fuel Continuity	A qualitative description of the distribution of fuels both horizontally and vertically. Continuous fuels readily support fire spread. The larger the fuel discontinuity, the greater the fire intensity required for fire spread.	(USDA 2023)
Fuel Loading	The amount of fuel present expressed quantitatively in terms of weight of fuel per unit area. This may be available fuel (consumable fuel) or total fuel and is usually dry weight.	(NWCG 2024)
Fuel Model	Simulated fuel complex for which all fuel descriptors required for the solution of a mathematical rate of spread model have been specified.	(NWCG 2024)
Fuel Moisture	Expressed as a percent or fraction of oven-dry fuel weight. It is the most important fuel property controlling flammability. In living plants, fluctuations vary considerably by species but are usually above 80% to 100%. As plants mature, moisture content decreases. When herbaceous plants cure, their moisture content responds as dead fuel moisture content, which fluctuates according to changes in temperature, humidity, and precipitation.	(USDA 2023)

Term	Definition	Source
Fuel Reduction	Manipulation, including combustion, or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.	(NWCG 2024)
Prescribed Fire	Any fire intentionally ignited by management in accordance with applicable laws, policies, and regulations to meet specific objectives. Also called a controlled burn or prescribed burn.	(USDA 2023)
Probability (Wildfire)	Likelihood that a wildfire will burn a given point or area during a specified period of time.	(MT DNRC 2023b)
Rate of Spread (ROS)	The rate of spread, measured in chains per hour (ch/h), is defined as the speed with which the fire is moving away from the site of origin. Wind, moisture, and slope drive the fire. The flaming zone, or fire head, moves away from the origin quickly with great intensity.	(NWCG 2023a)
Resource (Wildfire)	Resources are natural features, such as wildlife habitat, vegetation type, or water, with specific importance or value.	(DNRC 2020)
Susceptibility (Wildfire)	Propensity of an asset or resource to be damaged if a wildfire occurs.	(DNRC 2020)
Vulnerability (Wildfire)	A function of exposure and susceptibility.	(DNRC 2020)
Wildfire Hazard	A physical situation with potential for causing damage to vulnerable resources or assets. Quantitatively, wildfire hazard is measured by two main factors: 1) burn probability (or likelihood of burning), and 2) fire intensity (measured as flame length, fireline intensity, or other similar measures).	(DNRC 2020)
Wildfire Risk	A function of wildfire hazard (probability and intensity) and vulnerability (exposure and susceptibility) of assets and resources.	(MT DNRC 2023b)

Appendix H: Wildland Urban Interface Summary Table

Table 15 Toole County WUI Components and Definitions

WUI Component	Definition
Functional WUI Areas	
Direct Exposure	Burnable wildland that contains or is near a structure located on or surrounded by burnable land cover. Directly exposed structures could benefit from both the hardening of the structure to resist ignition and the reduction of fuel in the home ignition zone to reduce the structure's exposure to heat and embers.
Indirect Exposure	Nonburnable land that contains or is near a structure and is within 900 m of burnable land cover. Indirectly exposed structures could benefit from hardening of the structure to resist ignition from embers and nearby structures.
Limited Exposure	Nonburnable land that contains a structure but is greater than 900 m from burnable land cover.
Critical Fireshed	Burnable land area within 1,500 m (1 mile) of a group of structures but does not itself contain structures.
Nonburnable Fireshed	Nonburnable land cover within 1,500 m (1 mile) of a group of structures but does not itself contain structures.
Additional WUI Areas: Community Resources and Infrastructure	
Roads Critical to Ingress/Egress	Description: Includes roads or sections of the following roads that were not included in the Functional WUI with a ½-mile buffer (1-mile total width). - Aschim - Bootlegger Road - Coal Mine Road - Dead Indian Road - Dunkirk Road - Galata Road - Highway 2 - Highway 417 - Interstate 15 - Kevin Highway - Ledger Road - Loop Road - Maggie Ward - Miners Coulee Road - Nine Mile Road - Oilmont Road - Peterson Road - Strawberry Road - Sweetgrass Hills Road Justification: Ingress/Egress roads represent the most likely route in the event of evacuation or access for fire suppression resources. These additional road segments were identified by the Core Team to be crucial to maintaining ingress to and egress from structures and areas of moderate to high public concentration or use and are increasing in use. Data Source: These road segments were identified and digitized in GIS during CWPP Core Team meetings, and a ½-mile buffer (1-mile total width) was applied.

WUI Component	Definition
Additional Critical Infrastructure	Description: Includes critical infrastructure assets that were not included in the Functional WUI with a ½-mile buffer (1-mile total width). Types of critical infrastructure include: • Railroads Justification: Within Toole County, critical infrastructure was identified through collaboration between the Core Team members. Types of critical infrastructure within the County include railroads. Though most railroads were already included in the functional WUI, there were several sections that needed to be included. This is particularly important given the high percentage of ignitions that occur along railroads. Data Source: These additional sites were identified and digitized in GIS during CWPP Core Team meetings, and a ½-mile buffer (1-mile total width) was applied.
Other Additions – Marias River Recreation Sites	Description: After identifying the extent of the Functional WUI and the overlapping WUI components within Toole County, several recreation areas along the river, as well as the roads leading to them, were identified and included in the WUI. Justification: Areas that attract recreationists are at risk to human-caused fires and thus can pose safety issues for those gathered. Times of high recreation use tend to coincide with periods of high fire danger. Additionally, limited ingress/egress roads to these sites necessitate special attention to protect both public evacuation and access for fire suppression resources. Data Source: These additional sites were identified and digitized in GIS during CWPP Core Team meetings, and a ½-mile buffer (1-mile total width for roads) was applied.